PULSAFEEDER®
An IDEX Water & Wastewater Business

Product List

Effective 01/16/12

novatech INTERNATIONAL

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Metering Pumps and Control Systems

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DUE TO CONTINUOUS IMPROVEMENT OF OUR PRODUCTS, WE RESERVE THE RIGHT TO UPDATE THE INFORMATION CONTAINED IN THIS CATALOG WITHOUT NOTICE.

IMPORTANT INFORMATION

WHEN PLACING AN ORDER

1) Fax, mail or telephone orders directly to the Customer Service Department:

novatech INTERNATIONAL
sales@novatech-usa.com
www.novatech-usa.com
Tel: (866) 433-6682 Fax: (866) 433-6684
Tel: (281) 359-8538 Fax: (281) 359-0084

2) Please have the following information available when placing an order:

Account Name	Special Tags or Marks (if needed)
Billing Zip Code	Item(s) Being Ordered
Purchase Order Number	Quantity of Each Item
Ship To Address	

3) Orders are immediately entered into the computer upon receipt. Our ability to change in house orders is limited. Please be certain your orders are complete when placed.

4) For assistance or to order a “special” pump model not available in the price schedule, please contact our Technical Support Department.

5) Orders are assigned standard lead times based on the size of the order and the time required to manufacture the particular products. Requests to expedite orders may be routed through our Customer Service Department.

6) Repairs and returns are coordinated through our Customer Service Department. All orders returned must have factory authorization and are subject to a 25% restocking charge.

- Prices are subject to change without notice and are effective when order is accepted and acknowledged at point of shipment.
- When ordering, specify your P.O. number, model number, quantity, price, shipping and/or billing address and order date.
- **Standard terms are NET 30 days from date of invoice for approved accounts on open account.**
- **WE ACCEPT VISA, MASTERCARD, AMERICAN EXPRESS and DISCOVER CARD.**
- **ONE PERCENT DISCOUNT AVAILABLE FOR PAYMENT WITHIN 10 DAYS OF INVOICE DATE FOR ACCOUNTS THAT ARE CURRENT.**
- **PAYMENT BY CREDIT CARD WILL NOT RECEIVE AN ADDITIONAL DISCOUNT.**
- All prices are F.O.B. Punta Gorda, FL or Kingwood (Houston) Texas location.
- Custom product sales are final.
- Charges for export documentation apply.
- Expediting fees may apply.
- Fees for changes to or cancellation of orders may apply.

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PULSAtron®

Feature Selection Guide

Pulsafeeder offers one of the most flexible electronic metering pumps in the world. The product can be configured to meet a large variety of applications and needs. The next few pages will guide you in structuring a complete and correct model number.

The first step in selecting the right model for your application is to select the correct Series. Each Series offers a variety of features that distinguish it from other Series. Within each Series are selections of models that offer different flow/pressure envelopes to choose from.

The following descriptions will help you understand the different features and then the chart at the bottom of the page will let you select the appropriate models that have the features you need.

4-20mA	Control the pump stroke frequence based on a current input signal from an external device. At 4mA input, the pump will not stroke. At 20mA input, the pump will stroke 100%
20-4mA	Same as 4-20 except that at 20mA input, the pump will not stroke and at 4mA input, the pump strokes at 100%.
External Pace / Water Meter	Allows the pump stroke to be controlled by an external dry contact closure, such as is provided by a Water Meter. For each closure, the pump will stroke one time. Some models provide the ability to multiply or divide the pulses.
Stop Function	A dry contact input that will stop the pump on closure and allow the pump to operate when open.
Touch Pad	Electronic 'touch pad' control with internationally recognized symbols.
Digital Display	Pump parameters are displayed on an LCD or LED type display.
Signal Relay	Provides a 24V DC signal output from the pump based on user specified conditions.
Power Relay	Provides AC power output from the pump based on user specified conditions.
Alarm Display	Flashing display or LED indicator that will display an alarm condition on the front panel of the pump.
Timed Sequences	Ability to pre-program operation for repetitive metering.
Programmable Timer	Timer that can be programmed with up to 8 on/off cycles per day during a 7-day week.
Hall Effect	Hall Effect Water Meter input.
Conductivity Control	Includes a conductivity controller built into the pump.
Bleed Relay	Separate relay used to control a solenoid that will "Bleed" a cooling tower as part of a control system.
Timer Control	User defined timer functions that control when the pump will operate. Used in Cooling Tower control systems.
Flow Control	Optional Flow Switch turns pump on when flow is active.

	Flow Capacity		Pressure																	
Series	GPH	LPH	PSIG	BAR	Turn Down Ratio	4-20 mA	20-4 mA	External Pace And Stop	External Pace Or Stop Function	Touch Pad	Digital Display	Signal/Power Relay	Alarm Signals	Timed Sequences	Programmable Timer	Hall Effect Input	Conductivity Control	Bleed Relay	Timer Control	Flow Control
MP	0.13 to 21	0.50 to	20 to 300	1.3 to 21	1000:1	S	S	S		S	S	S	S	S						
E Plus	0.13 to 25	0.50 to	30 to 300	2.0 to 21	100:1	O		O												
HV	0.50 to 10	1.9 to 37.9	80 to 100	5.6 to 17	100:1	O														
E	0.13 to 25	0.50 to	20 to 300	1.3 to 21	100:1															
E-DC	0.25 to 1.85	0.90 to 7.0	100 to 150	7 to 10	100:1															
D	0.25 to 2	0.90 to 7.6	50 to 250	3.3 to 17	100:1			S		S	S									S
A Plus	0.25 to 2	0.90 to 7.6	50 to 250	3.3 to 17	100:1				O											
C Plus	0.25 to 1.25	0.90 to 4.7	80	5.6	100:1				O											
C	0.25 to 1.25	0.90 to 4.7	80	5.6	10:1				O											
CW	0.25 to 1.25	0.90 to 4.7	100 to 150	7 to 10	100:1			S		S	S					S	S	S	S	S
CL	0.25 to 1.25	0.90 to 4.7	100 to 150	7 to 10	100:1					S	S						S	S	S	S
WT	0.25 to 1.25	0.90 to 4.7	100 to 150	7 to 10	100:1			S		S	S					S		S		S
ET	0.21 to 2	0.80 to	20 to 250	1.3 to 17	100:1			S						S						
T7	0.50 to 2	1.9 to 7.6	100	7	10:1										S					

S = Standard Features O = Optional Features

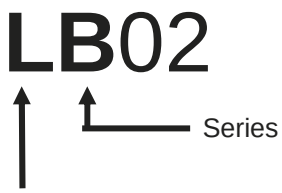
PULSAtron® *Model Selection Guide*

Once you have selected the appropriate Series, you must configure the model so that it is built with the features you desire. The Configuration Guide associated with each Series will present the most popular selections. Select one code from each category to build up a complete model string.

To help you better understand the model string, in the following pages, we will explain what each of the digits represent and provide you some additional charts to help you select options not found in the Configuration Guides.

Model Selection:

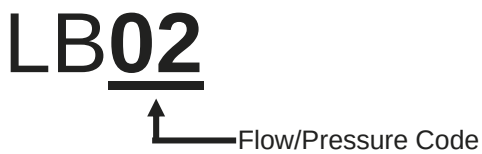
The first four digits represent the Series and Flow/Pressure Selection.



The first digit will always start with the letter 'L'.

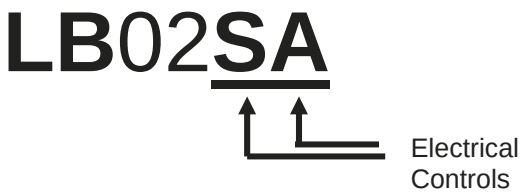
All PULSAtron models begin with this letter. The second letter designates the Series (e.g. Series MP, Series E+, Series A+, etc.). Each series has a different set of features that are available in terms of control and flow/pressure capacity. The next two digits represent the flow/pressure capacity of the pump.

Series Code Designator	
Series MP	M
Series E Plus	P
Series HV	V
Series E	E
Series E-DC	S
Series D	F
Series A Plus	B
Series C Plus	D
Series C & T7	C
Series CW	W
Series CL	L
Series WT	Q
Series ET	T



Digits 3 & 4 represent the Flow/Pressure Code.

This code represents the specific flow/pressure rating for the model and can be found in the specification for each Series.



Digits 5 & 6 represent the Controls and Electrical selections.

These selections are explained for each model in the Configuration Guide.

PULSAtron®

Selection Guide cont'd.

Selecting the Wet-End Code & Connection Type:

Digits 7-10 in the string represent the wet-end code. It is the group of four digits set apart by the dash lines.

LB02SA-**PTC1**

These four digits represent your wet-end code and connection type.

The four digits in the wet-end code represent the Head Material, Seats & O-Rings, Ball Material and Connection type. Using the above example, the code breads down as follows:

P - Head Material, including fittings. In this example, the P represents GFPPL.
T - Seat & O-Ring Material. In this example, the T represents TFE.
C - Types of Balls used in the valves. In this example, the C represents Ceramic.
1 - Connection type. In this example, the 1 represents tubing connections for 3/8" OD tubing.

In the configuration Guide, we have listed the most popular Wet-End codes. If you don't find the materials or connection selection to meet your needs, refer to the following selection guides to configure the proper Wet-End Code.

Selecting the Wet-End Code:

The wet-end code represents the materials of construction that will be in contact with the chemical you are pumping. It is critical that the materials selected are compatible. If you do not find the wet-end code to meet your application in the configuration guides, you can use the Wet-End Code Selection Guide to determine the correct Head Material, Seats & O-Rings and Balls. If you do not know what materials are compatible with the chemicals you are pumping, refer to the chemical compatibility chart below. We have identified the proper wet-end code for the chemicals in the list. If your chemical is not found in the list, please contact your chemical supplier or visit www.pulsatron.com for a complete listing.

PULSAtron Wet-End Code Selection

Head & Fittings

A	=	316 Stainless Steel (All models except H8)
K	=	PVDF (Kynar) (Consult factory for J7, H8 models)
P	=	GFPPL (Polypropylene)
V	=	PVC (Poly Vinyl Chloride) (for models rated < 150 psi excluding K7, H7, H8)
W	=	PVC (for models > 150 psi and K7, H7, H8)

Seats

H	=	CSPE
T	=	TFE (not available with TFE ball over 150 psi)
V	=	Viton (150 psi max.)

Balls

C	=	Ceramic
H	=	Alloy C (Hastelloy)
S	=	316 Stainless Steel
T	=	TFE (not available with TFE seat over 150 psi)

CSPE is generic formulation of Hypalon, a registered trademark of E.I. DuPont Co.
Viton is a registered trademark of E.I. DuPont Company.

Chemical Compatibility Chart

Chemical	Liquid End Code
ACETIC ACID, 5 - 10%	PHC
ALUMINUM SULFATE	VHC
AMMONIA, 10%	PHC
BROMINE	KTC
CALCIUM HYPOCHLORITE	VVC
CITRIC ACID, 10 - 20%	PHC
DEAE - Steamline Treatment	ATS
ETHYLENE GLYCOL	PTC
FERRIC CHLORIDE	VTC
FERRIC SULFATE	PTC
FLUOSILICIC ACID	PTT
HYDROCHLORIC ACID, 0 - 37%	PTC
HYDROCHLORIC ACID, 37 - 100%	KTT
HYDROFLUOSILICIC ACID, 20%	PTT
HYDROGEN PEROXIDE, 0 - 30%	VVC
LACTIC ACID	PTC
NITRIC ACID, 0 - 20%	PVC
PHOSPHORIC ACID, 0 - 100%	KTC
POTASSIUM CHLORIDE	PTC
POTASSIUM PERMANGANATE	PTC
SODIUM BI-CARBONATE	PTC
SODIUM BI-SULFATE	PTC
SODIUM BI-SULFITE	PTC
SODIUM CARBONATE	PTC
SODIUM HYDROXIDE, 0 - 50%	PHC
SODIUM HYPOCHLORITE	VVC
SODIUM NITRATE	PTC
SODIUM SILICATE	PHC
SODIUM SULFATE	PHC
SODIUM SULFIDE	PHC
SULFURIC ACID, 0 - 10%	PTC
SULFURIC ACID, 10 - 75%	PTC
SULFURIC ACID, 95 - 100%	KTC

This is an abbreviated version using most common chemicals. Refer to the Chemical Resistance Guide (EMP-030) for a more detailed listing.

Selecting the Connection Code:

Selecting the proper connection code is probably the most difficult part of choosing a PULSAtron pump. Because of the flexibility built into this product line to meet a large variety of applications, the connection codes are determined by alot more factors than just the size of the tubing. Connection code is probably the wrong name for this selection because you are selecting more than just the tubing size. This code also determines the type of valves used in the pump. The valve type is determined by factors such as flow rate of the pump, ball type selected and viscosity of the fluid you will be pumping.

Flow Rate:

The pump you select is rated to pump a certain number of gallons per hour (GPH). When selecting the connection code, please note the GPH limitations and select a connection that fits within the parameters of the pump model that you selected.

Ball Type:

If the material selected for the balls used in the check valves is TFE, you will probably need to use a spring-loaded connection. This is due to the fact that the weight of the balls will not allow them to seat properly without the spring. See the connection chart for a list of spring loaded connection types.

Viscosity:

Viscosity of the fluid you are pumping impacts the connection. The higher viscosity fluids (>3000 cps) require larger connection types and spring-loaded valves. Medium viscosity fluids (1000 to 3000 cps) can be pumped without the spring-loaded valves but you must use SS balls with these connections in order for the balls to seat properly in the valve.

Connection Codes

Code	Connect Type	Suction	Discharge	Spring	GPH Flow Limitations	Viscosity	Other Factors
2	Piping	.25" FNPT	.25" FNPT		0 - 1.88	1000 up to 3000 cps w / SS balls	No Bleed Valve
4	Piping	.25" FNPT	.25" FNPT		1.63 - 10	1000 up to 3000 cps w / SS balls	No Bleed Valve
6	Piping	.25" FNPT	.25" FNPT	Yes	Up to 10	less than 10,000 cps	No Bleed Valve
8	Piping	.50" FNPT	.50" FNPT	Yes	Up to 25	less than 10,000 cps	No Bleed Valve
C	Piping	.50" FNPT	.50" FNPT		25	1000 up to 3000 cps w / SS balls	No Bleed Valve
G	Piping	.25" FNPT	.25" FNPT	Yes	0 - 1.88	1000 up to 3000 cps w / SS balls	No Bleed Valve
I	Piping	.50" MNPT	.50" MNPT	Yes	Up to 10	less than 10,000 cps	No Bleed Valve
L	Piping	.50" MNPT	.50" MNPT		0 - 1.88	1000 up to 3000 cps w / SS balls	No Bleed Valve
X	Piping	.50" MNPT	.50" MNPT		1.63 - 10	1000 up to 3000 cps w / SS balls	No Bleed Valve
1	Tubing	.25" x .38"	.25" x .38"		0 - 1.88	1000 up to 3000 cps w / SS balls	
3	Tubing	.38" x .50"	.38" x .50"		1.63 - 10	1000 up to 3000 cps w / SS balls	
5	Tubing	.50" x .75"	.38" x .50"	Yes	Up to 10	less than 10,000 cps	
7	Tubing	.50" x .75"	.50" FNPT	Yes	Up to 25	less than 10,000 cps	No Bleed Valve
9	Tubing	.25" x .38"	.25" x .38"	Yes	0 - 1.88	1000 up to 3000 cps w / SS balls	Degas Head/No Bleed Valve
A	Tubing	.38" x .50"	.38" x .50"		0 - 1.88	1000 up to 3000 cps w / SS balls	
B	Tubing	.50" x .75"	.50" x .75"		25	1000 up to 3000 cps w / SS balls	No Bleed Valve
D	Tubing	.25" x .38"	.25" x .38"	Yes	0 - 1.88	1000 up to 3000 cps w / SS balls	
E	Tubing	.38" x .50"	.38" x .50"	Yes	0 - 1.88	1000 up to 3000 cps w / SS balls	
F	Tubing	.38" x .50"	.38" x .50"	Yes	1.63 - 10	1000 up to 3000 cps w / SS balls	Not Available In PVDF
H	Tubing	.25" x .38"	.25" x .38"		1.63 - 10	1000 up to 3000 cps w / SS balls	
J	Tubing	.25" x .38"	.25" x .38"		0 - 1.04	1000 up to 3000 cps w / SS balls	
K	Tubing	.50" x .75"	.50" x .75"	Yes	1.88 - 25 (<50 psi)	less than 10,000 cps	No Bleed Valve
					LPH Flow Limitations		
M	Piping	G 1/2 A	G 1/2 A		6.15 - 37.85	1000 up to 3000 cps w / SS balls	
R	Piping	G 1/2 A	G 1/2 A		0 - 7.10	1000 up to 3000 cps w / SS balls	
N	Tubing	4 x 10 mm	4 x 10 mm		0 - 7.10	1000 up to 3000 cps w / SS balls	
P	Tubing	4 x 6 mm	4 x 6 mm		0 - 3.94	1000 up to 3000 cps w / SS balls	
Q	Tubing	10 x 14 mm	10 x 14 mm		6.15 - 37.85	1000 up to 3000 cps w / SS balls	
S	Tubing	6 x 10 mm	6 x 10 mm		> 18.93	1000 up to 3000 cps w / SS balls	
T	Tubing	6 x 10 mm	6 x 10 mm		0 - 7.10	1000 up to 3000 cps w / SS balls	Degas Head/No Bleed Valve
U	Tubing	6 x 10 mm	6 x 10 mm		0 - 7.10	1000 up to 3000 cps w / SS balls	
V	Tubing	12 x 19 mm	12 x 19 mm		> 29.96	1000 up to 3000 cps w / SS balls	No Bleed Valve
W	Tubing	10 x 16 mm	10 x 16 mm		6.15 - 37.85	1000 up to 3000 cps w / SS balls	
Y	Tubing	6 x 12 mm	6 x 12 mm		0 - 7.10	1000 up to 3000 cps w / SS balls	

- **Pumps ranging from 0.25 gph (0.9 lph) to 0.90 gph (3.4 lph) with the stainless steel ball option ("S" in the 9th digit of the model number) must select a connection code with a spring.**
- **Pumps less than or equal to .25 gph (0.9 lph) require a connection code with a spring and must use a ceramic ball in place of stainless steel.**
- **Stainless steel head assemblies are only available in piping connections.**

PULSAtron® ***Selection Guide cont'd.***

Sensor/Flow Options (Models D, CL, CW & WT Only):

The Series D, CL, CW and WT have optional features that are covered by two additional digits in the Model Selection.

Series D:

LF02SA-PTC1-**1A**

Flow Switch Option
Electronic Connection Option

These selections are explained for each model in the Configuration Guide.

Series CL, CW & WT:

LW02SA-PTC1-**2A**

Flow Switch/Assembly Option
Sensor Option

These selections are explained for each model in the Configuration Guide.

Suffix Code:

LW02SA-PTC1-**XXX** ← Suffix Code

The last three digits of the model string are referred to as the Suffix Code. It is through the suffix code that the pump can be customized with optional features or customer specific features, e.g. private labeling. If your company has specific features that will be ordered on every pump, contact customer service with a description of what you want customized. We will then assign a unique suffix code that can be used as the last three digits in the model string when you place an order.

CZXXX = CE Approval

This suffix code tells us that you require CE Approval on the pump you are ordering. This suffix code is five digits and can be used in conjunction with other suffix codes by replacing the XXX after the CZ with another suffix code. For instance, if you require CE Approval and a Five Function Valve (shown below), the suffix code would be CZ500.

Standard Suffix Code Descriptions:

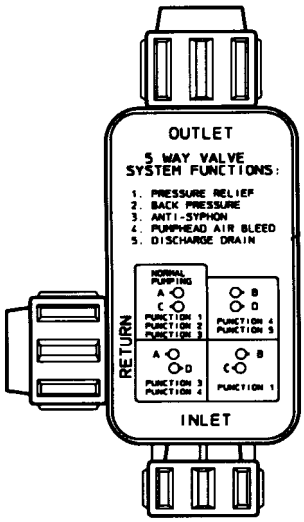
On the following pages are additional features that can be added to your PULSAtron pump through the use of the Suffix Code. Anytime you order a pump with one of these codes, it will be configured with that option.

***130** = PVDF Tubing*

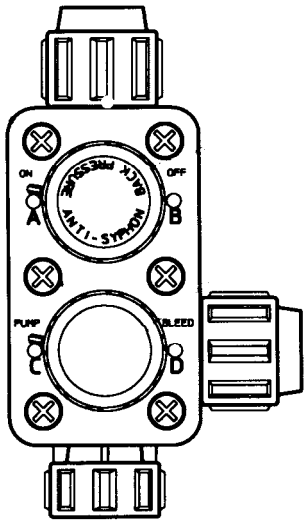
This suffix code will replace the standard pump tubing with PVDF Tubing.

***500** = Five Function Valve*

The five function valve is easily installed, no tools required. The valve operates with all PULSAtron models up to 240 GPD. The five function valve is packed with features that increase safety, enhance performance and generally improves the convenience of operation.



REAR VIEW



FRONT VIEW

FEATURES

- Pressure Relief – Allows for relief of excessive pressure in discharge line to protect connections and tubing.
- Back Pressure – Maintains output reproducibility and allows metering into atmospheric discharge.
- Anti-Siphon – Prevents siphoning through the pump when point of injection is lower than the pump or into the suction line of another pump. Rated at total vacuum.
- Air Bleed – Used during priming to manually remove air from the pump head.
- Discharge Drain – Depressurize pump discharge line without loosening tubing or fittings. Protects the operator from chemical exposure.

SPECIFICATIONS

Material Of Construction:

Valve Body	Polyvinylidene Flouride (PVDF)
Diaphragm	TFE faced CSPE
O-Rings	TFE
Hardware	18-8 Stainless Steel (Recessed)

Maximum Operating Pressure: 300 PSI/21 BAR (except PVC)

Maximum Flow: 10 GPH (37.85 LPH)

Maximum Viscosity: 1000 CPS

Pressure Relief Settings: (nominal cracking pressure)
275 PSI (17 BAR) - red
175 PSI (12 BAR) - green
125 PSI (8.6 BAR) - blue
50 PSI (2.8 BAR) - black (PVC only)

Note: Pressure relief will occur at no more than 50% above maximum rating of pump.

OPERATION

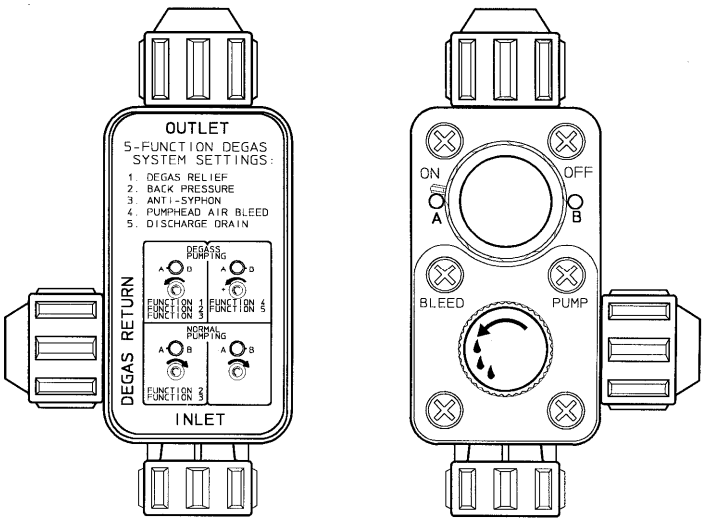
The functions are selected by setting two dual position selector knobs. The label on the back panel of the valve identifies each function with selector knob positions.

The five function valve is compatible with most PULSAtron pumps. Connected to the existing discharge valve the five function valve is capable of handling a large output flow as well as viscous liquids. A return port located on the side body provides flow of chemical back to the solution tank when in the air bleed or drain discharge mode.

PULSAtron® *Selection Guide cont'd.*

520 = DG/5FV Five Function Valve with De-Gas

With the DG/5FV you don't have to give up the accuracy and control of a solenoid metering pump in order to pump gaseous solutions. Available in a variety of materials and popular sizes, the DG/5FV is ready to tackle most applications. Not only does the DG/5FV provide degassing, it is packed with features that increase safety, enhance performance and generally improves the convenience of operation.



REAR VIEW FRONT VIEW

FEATURES

- De-Gas – Bypass gasses and fluid during normal pump operation. Allows for the constant removal of gases that would otherwise "air bind" the pump.
- Back Pressure – Maintains output reproducibility and allows metering into atmospheric discharge.
- Anti-Siphon – Prevents siphoning through the pump when point of injection is lower than the pump or into the suction line of another pump. Rated at total vacuum.
- Air Bleed – Used during priming to manually remove air from the pump head.
- Discharge Drain – Depressurize pump discharge line without loosening tubing or fittings. Protects the operator from chemical exposure.

SPECIFICATIONS

Material Of Construction:

Valve Body	Polyvinylidene Flouride (PVDF)
Diaphragm	TFE faced CSPE
O-Rings	Viton or CSPE
Hardware	18-8 Stainless Steel (Recessed)

Maximum Flow: 10 GPH (37.85 LPH)

Minimum Flow: 3 GPD (.47LPH)

Maximum Viscosity: 1000 CPS

MAX Pressure Ratings: Up to 250 psi (17 BAR)

Note: Degas/bypass volume is adjustable, typically 1-10% of pump output.

Connections: ¼" (0.635 cm) Male NPT
½" (1.27 cm) OD tubing
3/8" (0.95 cm) OD tubing

All ports (input, output & bypass) on the selected valve will be the same.

OPERATION

The functions are selected by setting two dual position selector knobs. The label on the back panel of the DG/5FV identifies each function with selector knob positions.

The DG/5FV is compatible with most PULSAtron pumps. Connected to the existing discharge valve the GG/5FV is capable of handling a large output flow as well as viscous liquids. A return port located on the side body provides flow of chemical back to the solution tank when in the degas, air bleed or drain discharge mode.

ITS = Integrated Tank System

The ITS System is a completely integrated tank system constructed of high density UV resistant polyethylene (PE) with a 15 gallon capacity. This tank system is translucent with 5 gallon increments and the tank's low level indicator allows visual monitoring of chemicals without opening the tank. The tight fitting child-proof lid keeps the chemical free of contaminants and protects the surrounding area from chemical fumes.

The ITS System also allows for easy access to the liquid end and control panel of the mounted pump.

A system consists of a chemical tank with lid and bulkhead fittings; a liquid level indicator float assembly; and feeder mounting hardware.

ITS Tank not available on LM, LP, LT, and LE: H4, H5, H6, H7, J7, H8, K7 models) If you require a different type or size tank, please refer to our accessory price book.

PULSAtron® Electronic Metering Pumps

Series MP

Key Features

- Automatic Control, Fully scalable 4-20mA current signal that can also be calibrated to precisely match the current signal reading of the sending device.
- Manual Control allows for a combined 1000:1 turndown resulting in accurate metering for critical applications.
- Flow Verification option is available on select sizes.
- Relay Output for computer interface or AC power allows for external control.
- Six-button Touch Pad Control with internationally recognized symbols for simplified programming.
- Simple Prompts in plain language allow for easy-to-understand instructions for programming. Available in three languages.
- Alarm Signals for signal loss, full count, circuit failure, pulse overflow and pulse rate high. Liquid low level indicator capability is standard.
- Timed Sequences can be set for selected intervals and rate for repetitive metering.
- Pulse Signals can be multiplied or divided by 1 to 999 allowing for pumps to handle peak requirements.
- LCD, 3 line backlit multi-lingual display allows for easy reading and user-friendly programming.
- Calibrated Flow Rate display with total volume pumped last day, month and since last reset.

Pressure and Flow Rate Capacity

MODEL		LMK2	LMB2	LMA2	LMD3	LMB3	LMA3	LMK3	LMF4	LMD4	LMB4	LMH4	LMG4	LME4	LMK5	LMH5	LMH6	LMK7	LMH7	LMH8
Capacity nominal (max.)	GPH	0.13	0.21	0.25	0.50	0.50	0.50	0.60	0.85	0.90	1.00	1.70	1.75	1.85	2.50	3.15	5.00	8.00	10.00	21.00
	GPD	3	5	6	12	12	12	14	20	22	24	41	42	44	60	76	120	192	240	504
	LPH	0.5	0.8	0.9	1.9	1.9	1.9	2.3	3.2	3.4	3.8	6.4	6.6	7.0	9.5	11.9	18.9	30.3	37.9	79.5
Pressure (max.)	PSIG	300	250	150	250	150	100	100	250	150	100	250	150	100	150	150	100	50	35	20
	BAR	21	17	10	17	10	7	7	17	10	7	17	10	7	10	10	7	3.3	2.4	1.3
Connections	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD													3/8" ID X 1/2" OD 1/2" ID X 3/4" OD (LPH8 ONLY) FLOW VERIFICATION (See Note)					
	Piping	1/4" FNPT													1/4" FNPT 1/2" FNPT					

Note: Flow Verification: Available on K3, B4 and E4 with connection code 1; H6, K7 and H7 with connection code H; 1/4" ID x 3/8" OD only.

Engineering Data

Reproducibility:	+/- 2% at maximum capacity
Viscosity Max CPS:	

For viscosity up to 3000 CPS, select connection size 3, 4, B or C with 316SS ball material. Flow rate will determine connection/ball size. Greater than 3000 CPS require spring loaded ball checks. See Selection Guide for proper connection.

Controls:	6-Station Membrane Switch
Status Display:	16-Position LCD Dot Matrix Backilght
LED Indicator Lights, Panel Mount:	Power On - Green
	Pulsing - Green Flashing
	Stop - Red
Stroke Frequency Max SPM:	125
External Stroke Frequency Control (Automatic):	
	4-20 mADC, 20-4 mADC External Pacing
Output Relay (Signal Level Option):	24 VDC, 10 mA
Output Relay (Power Option):	250 VAC, 50/60 HZ, 0.5A
Stroke Frequency Turn-Down Ratio:	100:1
Stroke Length Turn-Down Ratio:	10:1

Engineering Data

Power Input:	115 VAC/50-60 HZ/1 ph
	230 VAC/50-60 HZ/1 ph
Average Current Draw:	
@ 115 VAC; Amps:	1.0 Amps
@ 230 VAC; Amps:	0.5 Amps
Peak Input Power:	300 Watts
Average Input Power @ Max SPM:	130 Watts

PULSAtron Series MP Selection Guide

LM_ _ _ _ - _ _ _ - _ _ _

MODELS:	**K2**	= 0.13 gph / 3 gpd (0.5 lph) max pres.: 300 PSI (21 BAR)
	B2	= 0.21 gph / 5 gpd (0.8 lph) max pres.: 250 PSI (17 BAR)
	D3	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 250 PSI (17 BAR)
	F4	= 0.85 gph / 20 gpd (3.2 lph) max pres.: 250 PSI (17 BAR)
	H4	= 1.70 gph / 41 gpd (6.4 lph) max pres.: 250 PSI (17 BAR)
	A2	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	B3	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	D4	= 0.90 gph / 22 gpd (3.4 lph) max pres.: 150 PSI (10 BAR)
	G4	= 1.75 gph / 42 gpd (6.6 lph) max pres.: 150 PSI (10 BAR)
	K5	= 2.50 gph / 60 gpd (9.5 lph) max pres.: 150 PSI (10 BAR)
	H5	= 3.15 gph / 76 gpd (11.9 lph) max pres.: 150 PSI (10 BAR)
	A3	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 100 PSI (7 BAR)
	K3	= 0.60 gph / 14 gpd (2.3 lph) max pres.: 100 PSI (7 BAR)
	B4	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	E4	= 1.85 gph / 44 gpd (7.0 lph) max pres.: 100 PSI (7 BAR)
	H6	= 5.00 gph / 120 gpd (18.9 lph) max pres.: 100 PSI (7 BAR)
	K7	= 8.00 gph / 192 gpd (30.3 lph) max pres.: 50 PSI (3.3 BAR)
	H7	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 35 PSI (2.4 BAR)
	H8	= 21.0 gph / 504 gpd (79.5 lph) max pres.: 20 PSI (1.3 BAR)

CONTROLS:	**T**	= Signal Level Output Relay
	K	= Power Level Output Relay

ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)

LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PTC**	= GFPPL / TFE / Ceramic
	KTC	= PVDF / TFE / Ceramic (Consult factory for H8)
	VHC	= PVC / CSPE / Ceramic (not available on H7, H8, K7)
	VTC	= PVC / TFE / Ceramic (models <= 150 psi excluding H7, H8, K7)
	WTC	= PVC / TFE / Ceramic (models > 150 psi and H7, H8, K7)
	VVC	= PVC / Viton / Ceramic (not available on H8)
	ATS	= 316 S.S. / TFE / 316 S.S. (must use FNPT piping connection) (not available on H8)

See page 6 for additional liquid end materials.

CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	3	= Tubing .38" I.D. x .50" O.D. / .38" Ball, 1.63 - 10 GPH
	9	= Degas Head: .25" I.D. x .38" O.D. / 0-1.83 GPH
	J	= Tubing, .25" I.D. x .38" O.D. / .19 Ball; 0 - 1.04 GPH
	METRIC:	
	M	= G 1/2 A Threads, .38" Ball, 6.15 - 37.85 LPH
	R	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	Y	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

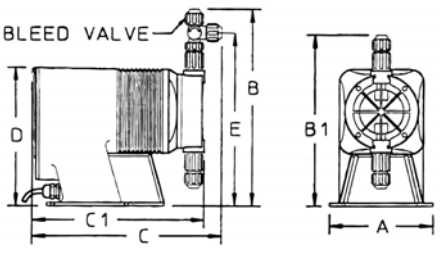
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.

SUFFIX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	FVE	= Flow Verification / EPDM (not available on pumps greater than 100 psi)
	FVV	= Flow Verification / Viton (not available on pumps greater than 100 psi)
	ITS	= 15 gal. ITS Tank System (ITS Tank not available on LM, LP, LT, and LE: H4, H5, H6, H7, H8, J7, K7 models)
	CZXXX	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LMB3TA-PTC1-XXX'

Dimensions



Series MP Dimensions (inches)

Model No.	A	B	B1	C	C1	D	E	Shpg Wt	Model No.	A	B	B1	C	C1	D	E	Shpg Wt
LMA2	5.4	10.3	-	10.8	-	7.5	8.9	13	LMH4	6.2	10.9	-	11.2	-	8.2	9.5	21
LMA3	5.4	10.6	-	10.7	-	7.5	9.2	13	LMH5	6.2	11.3	-	11.2	-	8.2	9.9	21
LMB2	5.4	10.3	-	10.8	-	7.5	8.9	13	LMH6	6.2	11.3	-	11.2	-	8.2	9.9	21
LMB3	5.4	10.6	-	10.7	-	7.5	9.2	13	LMH7	6.1	11.7	-	11.2	-	8.2	10.3	21
LMB4	5.4	10.6	-	10.7	-	7.5	9.2	13	LMH8*	6.1	-	10.9	-	10.6	8.2	-	25
LMD3	5.4	10.6	-	11.2	-	7.5	9.2	15	LMK2	5.4	10.3	-	10.8	-	7.5	8.9	13
LMD4	5.4	10.6	-	11.2	-	7.5	9.2	15	LMK3	5.4	10.6	-	10.7	-	7.5	9.2	13
LME4	5.4	10.6	-	11.2	-	7.5	9.2	15	LMK5	5.4	10.9	-	11.7	-	7.5	9.5	18
LMF4	5.4	10.6	-	11.7	-	7.5	9.2	18	LMK7	6.1	11.7	-	11.2	-	8.2	10.3	21
LMG4	5.4	10.6	-	11.7	-	7.5	9.2	18									

NOTE: Inches X 2.54 = cm / * the LMH8 is designed without a bleed valve available

PULSAtron®

Electronic Metering Pumps

Series E PLUS

Key Features

- **Automatic Control,** available with 4-20 mADC direct or external pacing, with stop function.
- **Manual Control** by on-line adjustable stroke rate and stroke length.
- **Auto-Off-Manual** switch.
- **Highly Reliable** timing circuit.
- **Circuit Protection** against voltage and current upsets.
- **Panel Mounted Fuse.**
- **Solenoid Protection** by thermal overload with auto reset.
- **Water Resistant,** for outdoor and indoor applications.
- **Indicator Lights,** panel mounted.
- **Guided Ball Check Valve Systems,** to reduce back flow and enhance outstanding priming characteristics.
- **Safe & Easy Priming** with durable leak-free **bleed valve assembly** (standard).

Pressure and Flow Rate Capacity

MODEL		LPK2	LPB2	LPA2	LPD3	LPB3	LPA3	LPK3	LPF4	LPD4	LPB4	LPH4	LPG4	LPE4	LPK5	LPH5	LPH6	LPK7	LPH7	LPJ7	LPH8
Capacity nominal (max.)	GPH	0.13	0.21	0.25	0.5	0.50	0.50	0.60	0.85	0.90	1.00	1.70	1.75	1.85	2.50	3.15	5.00	8.00	10.00	10.00	25.00
	GPD	3	5	6	12	12	12	14	20	22	24	41	42	44	60	76	120	192	240	240	600
	LPH	0.5	0.8	0.9	1.9	1.9	1.9	2.3	3.2	3.4	3.8	6.4	6.6	7	9.5	11.9	18.9	30.3	37.9	37.9	94.6
Pressure (max.)	PSIG	300	250	150	250	150	100	100	250	150	100	250	150	100	150	150	100	50	35	80	30
	BAR	21	17	10	17	10	7	7	17	10	7	17	10	7	10	10	7	3.3	2.4	5.5	2
Connections	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD													3/8" ID X 1/2" OD 1/2" ID X 3/4" OD (LPH8 ONLY)						
	Piping	1/4" FNPT													1/4" FNPT 1/2" FNPT						

Engineering Data

Reproducibility: +/- 2% at maximum capacity

Viscosity Max CPS :

For viscosity up to 3000 CPS, select connection size 3, 4, B or C with 316SS ball material. Flow rate will determine connection/ball size. Greater than 3000 CPS require spring loaded ball checks. See Selection Guide for proper connection.

Stroke Frequency Max SPM: 125

Stroke Frequency Turn-Down Ratio: 10:1

Stroke Length Turn-Down Ratio: 10:1

Power Input: 115 VAC/50-60 HZ/1 ph
230 VAC/50-60 HZ/1 ph

Average Current Draw:

@ 115 VAC; Amps: 1.0 Amps

@ 230 VAC; Amps: 0.5 Amps

Peak Input Power: 300 Watts

Average Input Power @ Max SPM: 130 Watts

PULSAtron Series E Plus Selection Guide

LP_ _ _ _ - _ _ _ - _ _ _

MODELS:	**K2**	= 0.13 gph / 3 gpd (0.5 lph) max pres.: 300 PSI (21 BAR)
	B2	= 0.21 gph / 5 gpd (0.8 lph) max pres.: 250 PSI (17 BAR)
	D3	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 250 PSI (17 BAR)
	F4	= 0.85 gph / 20 gpd (3.2 lph) max pres.: 250 PSI (17 BAR)
	H4	= 1.70 gph / 41 gpd (6.4 lph) max pres.: 250 PSI (17 BAR)
	A2	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	B3	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	D4	= 0.90 gph / 22 gpd (3.4 lph) max pres.: 150 PSI (10 BAR)
	G4	= 1.75 gph / 42 gpd (6.6 lph) max pres.: 150 PSI (10 BAR)
	K5	= 2.50 gph / 60 gpd (9.5 lph) max pres.: 150 PSI (10 BAR)
	H5	= 3.15 gph / 76 gpd (11.9 lph) max pres.: 150 PSI (10 BAR)
	A3	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 100 PSI (7 BAR)
	K3	= 0.60 gph / 14 gpd (2.3 lph) max pres.: 100 PSI (7 BAR)
	B4	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	E4	= 1.85 gph / 44 gpd (7.0 lph) max pres.: 100 PSI (7 BAR)
	H6	= 5.00 gph / 120 gpd (18.9 lph) max pres.: 100 PSI (7 BAR)
	K7	= 8.00 gph / 192 gpd (30.3 lph) max pres.: 50 PSI (3.3 BAR)
	H7	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 35 PSI (2.4 BAR)
	J7	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 80 PSI (5.5 BAR)
	H8	= 25.0 gph / 600 gpd (94.6 lph) max pres.: 30 PSI (2 BAR)
CONTROLS:	**S**	= Manual On/Off
	M	= 4-20mA DC Direct, w / Stop
	E	= External/Remote Pacing, w / Stop
ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PTC**	= GFPPL / TFE / Ceramic
	PTT	= GFPPL / TFE / TFE
	KTC	= PVDF / TFE / Ceramic (Consult factory for H8)
	VHC	= PVC / CSPE / Ceramic (not available on H7, H8, K7)
	VTC	= PVC / TFE / Ceramic (models <= 150 psi excluding H7, H8, K7)
	WTC	= PVC / TFE / Ceramic (models > 150 psi and H7, H8, K7)
	ATS	= 316 S.S. / TFE / 316 S.S. (must use FNPT piping connection) (not available on H8)

See page 6 for additional liquid end materials.

CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	3	= Tubing .38" I.D. x .50" O.D. / .38" Ball, 1.63 - 10 GPH
	4	= Piping .25" FNPT / .38" Ball, 1.63 - 10 GPH
	B	= Tubing .50" I.D. x .75" O.D. / .50" Ball, 25 GPH only
	METRIC:	
	M	= G 1/2 A Threads, .38" Ball, 6.15 - 37.85 LPH
	R	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	Y	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

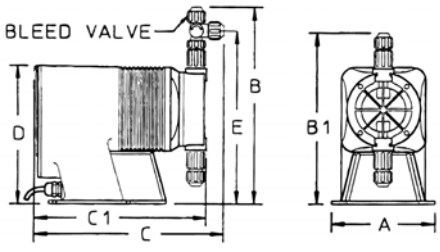
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.

SUFFIX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	ITS	= 15 gal. ITS Tank System (ITS Tank not available on LM, LP, LT, and LE: H4, H5, H6, H7, H8, J7, K7 models)
	CZXXX	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LPB3SA-PTC1-XXX'

Dimensions



Series E Plus Dimensions (inches)

Model No.	A	B	B1	C	C1	D	E	Shpg Wt	Model No.	A	B	B1	C	C1	D	E	Shpg Wt
LPA2	5	10	-	11	-	8	9	13	LPH4	6	11	-	11	-	8	9.5	21
LPA3	5	11	-	11	-	8	9	13	LPH5	6	11	-	11	-	8	9.9	21
LPB2	5	10	-	11	-	8	9	13	LPH6	6	11	-	12	-	8	9.9	21
LPB3	5	11	-	11	-	8	9	13	LPH7	6	12	-	12	-	8	10	21
LPB4	5	11	-	11	-	8	9	13	LPH8*	6	-	11	-	11	8	-	26
LPD3	5	11	-	11	-	8	9	15	LPK2	5	10	-	11	-	8	8.9	13
LPD4	5	11	-	11	-	8	9	15	LPK3	5	11	-	11	-	8	9.2	13
LPE4	5	11	-	11	-	8	9	15	LPK5	5	11	-	12	-	8	9.5	18
LPF4	5	11	-	12	-	8	9	18	LPK7	6	12	-	11	-	8	10	21
LPG4	5	11	-	12	-	8	9	18	LPJ7	6	10	-	11	-	-	-	21

NOTE: Inches X 2.54 = cm /* the LPH8 is designed without a bleed valve availa

PULSAtron®

Electronic Metering Pumps

Series HV

Key Features

- **Automatic Control,** available with 4-20 mADC direct or external pacing, with stop function.
- **Manual Control** by on-line adjustable stroke rate and stroke length.
- **Agency approved** for demanding **OUTDOOR** and indoor applications.
- **Auto-Off-Manual** switch.
- **Highly Reliable** timing circuit.
- **Circuit Protection** against voltage and current upsets.
- **Panel Mounted Fuse.**
- **Solenoid Protection** by thermal overload with auto reset.
- **Water Resistant,** for outdoor and indoor applications.
- **Indicator Lights,** panel mounted.
- **Guided Ball Check Valve Systems,** to reduce back flow and enhance outstanding priming characteristics.
- **Viscosities to 20,000 CPS**.

Pressure and Flow Rate Capacity

MODEL		LVB3	LVF4	LVG4	LVG5	LVH7
Capacity nominal (max.)	GPH	0.50	1.00	2.00	4.00	10.00
	GPD	12	24	48	96	240
	LPH	1.9	3.8	7.6	15.1	37.9
Pressure (max.)	PSIG	150	150	110	110	80
	BAR	10	10	7	7	5.6
Connections	Tubing	(S) .50" I.D. X .75" O.D. .38" I.D. X .50" OD (LVB3 & F4 only) (S & D) .50" I.D. X .75" O.D. (LVG4,G5 & H7 only)				

Engineering Data

Reproducibility:	+/- 2% at maximum capacity
Viscosity Max CPS:	20,000 CPS
Stroke Frequency Max SPM:	125
Stroke Frequency Turn-Down Ratio:	10:1
Stroke Length Turn-Down Ratio:	10:1
Power Input:	115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph
Average Current Draw:	
@ 115 VAC; Amps:	1.0 Amps
@ 230 VAC; Amps:	0.5 Amps @ 230 VAC
Peak Input Power:	300 Watts
Average Input Power @ Max SPM:	130 Watts

PULSAtron Series HV Selection Guide

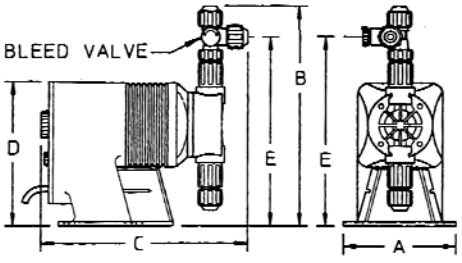
LV _ _ _ _ _ - _ _ _ - _ _ _

MODELS:	**B3**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	F4	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 150 PSI (10 BAR)
	G4	= 2.00 gph / 48 gpd (7.6 lph) max pres.: 110 PSI (7 BAR)
	G5	= 4.00 gph / 96 gpd (15.1 lph) max pres.: 110 PSI (7 BAR)
	H7	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 80 PSI (5.6 BAR)
CONTROLS:	**S**	= Manual On/Off
	M	= 4-20mADC Direct, w / Stop
	E	= External/Remote Pacing, w / Stop
ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PTT**	= GFPPL / TFE / TFE - LVB3 & F4 only
	PTS	= GFPPL / TFE / 316 SS - LVG4, G5 & H7 only
	WTS	= PVC / TFE / 316 SS - LVH7 only
	VTT	= PVC / TFE / TFE - LVB3 & F4 only
	VTS	= PVC / TFE / 316 SS - LVG5 & G4
		No other liquid end materials available.
CONNECTION SIZES:	**5**	= Tubing (S) .50" I.D. x .75" O.D. / .38" I.D. x .50" O.D. - LVB3 & F4 only
	K	= Tubing .50" I.D. x .75" O.D. - LVG4, G5 & H7 only
No other connection sizes available. Pumps come with 4' suction tubing and 8' discharge tubing. No bleed		
SUFFIX CODES	**XXX**	= No Additional Options
	CZXXX	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LVB3SA-VTT5-XXX'

Dimensions



Series HV Dimensions (inches)					
Model No.	A	B	C	D	Shipping Weight
LVB3	5.4	9.3	9.5	7.5	13
LVF4	5.4	10.8	10.8	7.5	18
LVG4	5.4	9.5	10.6	7.5	18
LVG5	5.4	10.8	10.8	7.5	18
LVH7	6.1	11.5	11	8.2	25

NOTE: Inches X 2.54 = cm

PULSAtron®

Electronic Metering Pumps

Series E

Key Features

- **Manual Control** by on-line adjustable stroke rate and stroke length.
- **Agency approved** for demanding **OUTDOOR** and indoor applications.
- **Highly Reliable** timing circuit.
- **Water Resistant** excellent for **OUTDOOR** and indoor applications.
- **Internally Dampened To Reduce Noise,** very acceptable for household installations.
- **Guided Ball Check Valve Systems,** to reduce back flow and enhance outstanding priming characteristics.
- **Premium Standard Wetted Component Materials.**
- **Few Moving Parts** and **Wall Mountable.**
- **Safe & Easy Priming** with durable leak-free **bleed valve assembly** (standard).

Pressure and Flow Rate Capacity

MODEL		LEK2	LE12	LE02	LE33	LE13	LE03	LEK3	LEF4	LE34	LE14	LEH4	LEG4	LE44	LEK5	LEH5	LEH6	LEK7	LEH7	LEJ7	LEH8
Capacity nominal (max.)	GPH	0.13	0.21	0.25	0.50	0.50	0.50	0.60	0.85	0.90	1.00	1.70	1.75	1.85	2.50	3.15	5.00	8.00	10.00	10.00	25.00
	GPD	3	5	6	12	12	12	14	20	22	24	41	42	44	60	76	120	192	240	240	600
	LPH	0.5	0.8	0.9	1.9	1.9	1.9	2.3	3.2	3.4	3.8	6.4	6.6	7	9.5	11.9	18.9	30.3	37.9	37.9	94.6
Pressure (max.)	PSIG	300	250	150	250	150	100	100	250	150	100	250	150	100	150	150	100	50	35	80	30
	BAR	21	17	10	17	10	7	7	17	10	7	17	10	7	10	10	7	3.3	2.4	5.5	2
Connections	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD													3/8" ID X 1/2" OD 1/2" ID X 3/4" OD (LPH8 ONLY)						
	Piping	1/4" FNPT													1/4" FNPT 1/2" FNPT						

Engineering Data

Reproducibility:	+/- 3% at maximum capacity
Viscosity Max CPS:	For viscosity up to 3000 CPS, select connection size 3, 4, B or C with 316SS ball material. Flow rate will determine connection/ball size. Greater than 3000 CPS require spring loaded ball checks. See Selection Guide for proper connection.
Stroke Frequency Max SPM:	125
Stroke Frequency Turn-Down Ratio:	10:1
Stroke Length Turn-Down Ratio:	10:1
Power Input:	115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph
Average Current Draw:	
@ 115VAC; Amps:	1.0 Amps
@ 230 VAC; Amps:	0.5 Amps
Peak Input Power:	300 Watts
Average Input Power @ Max SPM:	130 Watts

PULSAtron Series E Selection Guide

LE_ _ | S | _ - _ _ _ | _ - _ _ _

MODELS:	**K2**	= 0.13 gph / 3 gpd (0.5 lph) max pres.: 300 PSI (21 BAR)
	12	= 0.21 gph 5 gpd (0.8 lph) max pres.: 250 PSI (17 BAR)
	33	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 250 PSI (17 BAR)
	F4	= 0.85 gph / 20 gpd (3.2 lph) max pres.: 250 PSI (17 BAR)
	H4	= 1.70 gph / 41 gpd (6.4 lph) max pres.: 250 PSI (17 BAR)
	02	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	13	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	34	= 0.90 gph / 22 gpd (3.4 lph) max pres.: 150 PSI (10 BAR)
	G4	= 1.75 gph / 42 gpd (6.6 lph) max pres.: 150 PSI (10 BAR)
	K5	= 2.50 gph / 60 gpd (9.5 lph) max pres.: 150 PSI (10 BAR)
	H5	= 3.15 gph / 76 gpd (11.9 lph) max pres.: 150 PSI (10 BAR)
	03	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 100 PSI (7 BAR)
	K3	= 0.60 gph / 14 gpd (2.3 lph) max pres.: 100 PSI (7 BAR)
	14	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	44	= 1.85 gph / 44 gpd (7.0 lph) max pres.: 100 PSI (7 BAR)
	H6	= 5.00 gph / 120 gpd (18.9 lph) max pres.: 100 PSI (7 BAR)
	K7	= 8.00 gph / 192 gpd (30.3 lph) max pres.: 50 PSI (3.3 BAR)
	H7	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 35 PSI (2.4 BAR)
	J7	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 80 PSI (5.5 BAR)
	H8	= 25.0 gph / 600 gpd (94.6 lph) max pres.: 30 PSI (2 BAR)

CONTROLS:	**S**	= No Options Available

ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)

LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PHC**	= GFPPL / CSPE / Ceramic
	PTC	= GFPPL / TFE / Ceramic
	KTC	= PVDF / TFE / Ceramic (Consult factory for J7 or H8)
	VHC	= PVC / CSPE / Ceramic (not available on H7, H8, K7)
	VTC	= PVC / TFE / Ceramic (models <= 150 psi excluding H7, H8, K7)
	WTC	= PVC / TFE / Ceramic (models > 150 psi and H7, H8, K7)
	ATS	= 316 S.S. / TFE / 316 S.S. (must use FNPT piping connection) (not available on J7 or H8)

See page 6 for additional liquid end materials.

CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	3	= Tubing .38" I.D. x .50" O.D. / .38" Ball, 1.63 - 10 GPH
	METRIC:	
	M	= G 1/2 A Threads, .38" Ball, 6.15 - 37.85 LPH
	P	= 4 x 6mm, .25" Ball, 0 - 3.94 LPH

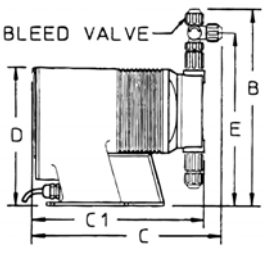
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.

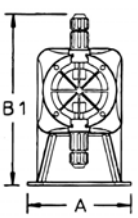
SUFFIX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	ITS	= 15 gal. ITS Tank System (ITS Tank not available on LM, LP, LT, and LE: H4, H5, H6, H7, H8, J7, K7 models)
	CZXXX	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LE33SA-PTC1-XXX'

Dimensions





Series E Dimensions (inches)

Model No.	A	B	B1	C	C1	D	E	Shpg Wt	Model No.	A	B	B1	C	C1	D	E	Shpg Wt
LE02	5	9.6	-	9.5	-	6.4	8.2	7	LEH4	6.2	10.9	-	11.2	-	8.2	9.5	18
LE03	5	9.8	-	9.5	-	6.4	8.4	7	LEH5	6.2	11.3	-	11.2	-	8.2	9.9	18
LE12	5	9.6	-	9.5	-	6.4	8.2	7	LEH6	6.2	11.3	-	11.2	-	8.2	9.9	18
LE13	5	9.8	-	9.5	-	6.4	8.4	7	LEH7	6.1	11.7	-	11.2	-	8.2	10.3	18
LE14	5	9.8	-	9.5	-	6.4	8.4	7	LEH8*	6.1	-	10.9	-	10.6	8.2	-	23
LE33	5.4	10.6	-	11.2	-	7.5	9.2	12	LEK2	5.4	10.3	-	10.8	-	7.5	8.9	10
LE34	5.4	10.6	-	11.2	-	7.5	9.2	12	LEK3	5.4	10.6	-	10.7	-	7.5	9.2	10
LE44	5.4	10.6	-	11.2	-	7.5	9.2	12	LEK5	5.4	10.9	-	11.7	-	7.5	9.5	15
LEF4	5.4	10.6	-	11.7	-	7.5	9.2	15	LEK7	6.1	11.7	-	11.2	-	8.2	10.3	18
LEG4	5.4	10.6	-	11.7	-	7.5	9.2	15	LEJ7	6.1	10.0	-	10.7	-	-	-	18

NOTE: Inches X 2.54 = cm

* the LEH8 is designed without a bleed valve available

PULSAtron®

Electronic Metering Pumps

Series E-DC

Key Features

- ***Powered by 12 Volt DC.***.
- ***Manual Control*** by on-line adjustable stroke rate and stroke length.
- ***Agency approved*** for demanding ***OUTDOOR*** and indoor applications.
- ***Highly Reliable*** timing circuit.
- ***Water Resistant*** excellent for ***OUTDOOR*** and indoor applications.
- ***Internally Dampened To Reduce Noise,*** very acceptable for household installations.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Premium Standard Wetted Component Materials.***
- ***Few Moving Parts*** and ***Wall Mountable.***
- ***Safe & Easy Priming*** with durable leak-free **bleed valve assembly** (standard).

Pressure and Flow Rate Capacity

MODEL		LS02	LS13	LS14	LS44
Capacity nominal (max.)	GPH	0.25	0.50	1.00	1.85
	GPD	6	12	24	44
	LPH	0.9	1.9	3.8	7.0
Pressure (max.)	PSIG	150	150	100	100
	BAR	10	10	7	7
Connections	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD			
	Piping	1/4" FNPT			

Engineering Data

Reproducibility:	+/- 3% at maximum capacity
Viscosity Max CPS:	
LS02, 13:	300 CPS
LS14, 44:	1000 CPS
Stroke Frequency Max SPM:	125
Stroke Frequency Turn-Down Ratio:	10:1
Stroke Length Turn-Down Ratio:	10:1
Power Input:	12.6 VDC Nominal Range 11.8-14.0 VDC
Average Current Draw:	
LS02, 13, 14 Amps:	4.0 Amps
LS44 Amps:	8.0 Amps
Peak Input Power:	
LS02, 13, 14 Amps:	138.6 Watts
LS44 Amps:	189 Watts
Average Input Power @ Max SPM:	
LS02, 13, 14 Amps:	50.4 Watts
LS44 Amps:	100.8 Watts

PULSAtron Series E-DC Selection Guide

LS_ _ | S | 4 - _ _ _ | _ - _ _ _

MODELS:	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	13	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	14	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	44	= 1.85 gph / 44 gpd (7.0 lph) max pres.: 100 PSI (7 BAR)
CONTROLS:	**S**	= No Options Available
ELECTRICAL:	**4**	= 12V DC
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PHC**	= GFPPL / CSPE / Ceramic
	PTC	= GFPPL / TFE / Ceramic
	PVC	= GFPPL / Viton / Ceramic
	VTC	= PVC / TFE / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	J	= Tubing .25" I.D. x .38" O.D./ 19" Ball, 0 - 1.04 GPH
	METRIC:	
	M	= G 1/2 A Threads, .38" Ball, 6.15 - 37.85 LPH
	R	G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH

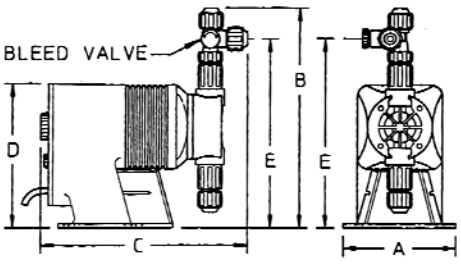
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.

SUFFIX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	ITS	= 15 gal. ITS Tank System
	CZXXX	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LS02S4-PTC1-XXX'

Dimensions



Series E-DC Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LS02	5.0	9.6	9.6	6.5	8.2	10
LS13	5.0	9.9	9.5	6.5	8.5	10
LS14	5.0	9.9	9.5	6.5	8.5	10
LS44	5.0	10.6	11.4	7.5	9.2	15

NOTE: Inches X 2.54 = cm

PULSAtron®

Electronic Metering Pumps

Series D

Key Features

- ***Completely Digital.*** The Series D is easy to set-up with scrolling menus that appear on the easy to read 16 digit LCD backlit display.
- ***Flow Control Option.*** Create a flow control system. Pump will stop if you lose flow.
- ***Hall Effect or Dry Contact water meter input.***
- ***Four-button Touch Pad Control*** with internationally recognized symbols for simplified programming.
- ***Water Resistant*** excellent for ***OUTDOOR*** and indoor applications.
- ***Internally Dampened To Reduce Noise,*** very acceptable for household installations.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Safe & Easy Priming*** with durable leak-free **bleed valve assembly** (standard).

OPTIONS

Add a flow switch to the Series D to create a Flow Control System. Available in 3/4" and 1" for easy installation in most systems.

Pressure and Flow Rate Capacity

MODEL		LF02	LFC3	LF03	LF04	LF64	LFC4
Capacity nominal (max.)	GPH	0.25	0.42	0.50	1.00	1.25	2.00
	GPD	6	10	12	24	30	48
	LPH	0.9	1.6	1.9	3.8	4.7	7.6
Pressure (max.)	PSIG	150	250	150	100	100	50
	BAR	10	17	10	7	7	3.3
Connections	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD					
	Piping	1/4" FNPT					

Engineering Data

Reproducibility:	+/- 3% at maximum capacity
Viscosity Max CPS:	1000 CPS
Status Display:	16-Posiition LCD Dot Matrix Backlight
Stroke Frequency Max SPM:	125
Stroke Frequency Turn-Down Ratio:	100:1
Power Input:	115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph
Average Current Draw:	
@ 115 VAC; Amps:	0.6 Amps
@ 230 VAC; Amps:	0.3 Amps @ 230 VAC
Peak Input Power:	130 Watts
Average Input Power @ Max SPM:	50 Watts

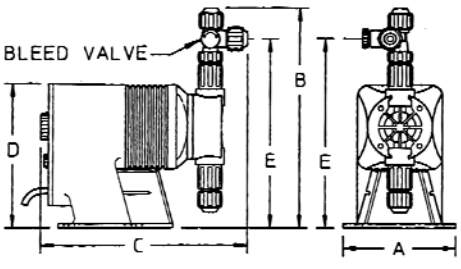
PULSAtron Series D Selection Guide

LF_ _ | S | _ - _ _ _ | _ - _ | _ - _ _ _

MODELS:	**C3**	= 0.42 gph / 10 gpd (1.6 lph) max pres.: 250 PSI (17 BAR)
	02	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	03	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	04	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	64	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
	C4	= 2.00 gph / 48 gpd (7.6 lph) max pres.: 50 PSI (3.3 BAR)
CONTROLS:	**S**	= No Options Available
ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PHC**	= GFPPL / CSPE / Ceramic
	PTC	= GFPPL / TFE / Ceramic
	PVC	= GFPPL / Viton / Ceramic
	KTC	= PVDF / TFE / Ceramic
	VHC	= PVC / CSPE / Ceramic
	VTC	= PVC / TFE / Ceramic (models <= 150 psi)
	WTC	= PVC / TFE / Ceramic (models > 150 psi)
See page 6 for additional liquid end materials.		
CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	3	= Tubing .38" I.D. x .50" O.D. / .38" Ball, 1.63 - 10 GPH
	9	= Degas Head: .25" I.D. x .38" O.D. / 0-1.83 GPH
	J	= Tubing, .25" I.D. x .38" O.D./ .19 Ball; 0 - 1.04 GPH
	METRIC:	
	R	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	Y	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.		
CONNECTION ELECTRONIC OPTIONS:	**X**	= Liquid Tight Connector for Hardwiring Options
FLOW:	**X**	= No Flow
	A	= Flow Switch 3/4"" with 8.5 ft. cable
	B	= Flow Switch 3/4"" with 25 ft. cable
	C	= Flow Switch 1"" with 8.5 ft. cable
	D	= Flow Switch 1"" with 25 ft. cable
	E	= 25 ft. - 22g, four conductor cable
SUFFIX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	ITS	= 15 gal. ITS Tank System
	CZXXX	= CE Approval (5 digits used for this suffix code)
See pages 9, 10 & 11 for additional information and specs.		

A completed model number should look like 'LF03SA-PTC1-XA-XXX'

Dimensions



Series D Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LF02	5.0	9.6	9.5	6.5	8.2	10
LFC3	5.0	9.9	9.5	6.5	8.5	10
LF03	5.0	9.9	9.5	6.5	8.5	10
LF04	5.0	9.9	9.5	6.5	8.5	10
LF64	5.0	9.9	9.5	6.5	8.5	10
LFC4	5.0	9.9	9.5	6.5	8.5	10

NOTE: Inches X 2.54 = cm

PULSAtron® Electronic Metering Pumps

Series A PLUS

Key Features

- ***Manual Control*** by on-line adjustable stroke rate and stroke length.
- ***Agency approved*** for demanding ***OUTDOOR*** and indoor applications.
- ***Highly Reliable*** timing circuit.
- ***Water Resistant*** excellent for ***OUTDOOR*** and indoor applications.
- ***Internally Dampened To Reduce Noise,*** very acceptable for household installations.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Premium Standard Wetted Component Materials.***
- ***Few Moving Parts*** and ***Wall Mountable.***
- ***Safe & Easy Priming*** with durable leak-free **bleed valve assembly** (standard).
- ***Optional Control:***

  External pace with auto/manual selection.
  External stop function
  1000:1 turndown control (S2, S3 & S4 sizes only)

Pressure and Flow Rate Capacity

MODEL			LBC2	LB02	LBC3	LB03	LB04	LB64	LBC4	LBS2	LBS3	LBS4
Capacity nominal (max.)		GPH	0.25	0.25	0.42	0.50	1.00	1.25	2.00	0.50	1.38	2.42
		GPD	6	6	10	12	24	30	48	12	33	58
		LPH	0.9	0.9	1.6	1.9	3.8	4.7	7.6	1.9	5.2	9.14
Pressure[1] (max.)	GFPP, PVDF, 316SS or PVC (W code) w/TFE Seats)	PSIG (Bar)	250 (17)	150 (10)	250 (17)	150 (10)	100 (7)	100 (7)	50 (3.3)	250 (17)	150 (10)	100 (7)
	PVC (V code) Viton or CSPE Seats / Degas Liquid End		150 (10)							150 (10)		
Connections		Tubing	1/4" ID X 3/8" OD						3/8" ID X 1/2" OD	1/4" ID X 3/8" OD		
		Piping	1/4" FNPT									
Strokes/Minute		SPM	125							250		

Note 1: Pumps with rated pressure above 150 PSI will be de-rated to 150 PSI Max. when selecting certain valve options, see Price Book for details.

Engineering Data

Reproducibility: +/- 3% at maximum capacity
Viscosity Max CPS: 1000 CPS
Stroke Frequency Max SPM: 125 / 250 by Model
Stroke Frequency Turn-Down Ratio: 10:1 / 100:1 by Model
Stroke Length Turn-Down Ratio: 10:1
Power Input: 115 VAC/50-60 HZ/1 ph
230 VAC/50-60 HZ/1 ph

Average Current Draw:
@ 115 VAC; Amps: 0.6 Amps
@ 230 VAC; Amps: 0.3 Amps
Peak Input Power: 130 Watts
Average Input Power @ Max SPM: 50 Watts

Pulsatron Series A Plus Selection Guide

LB _ _ _ _ - _ _ _ - _ _ _

Models

Product Code	Flow Rate			Pressure Rating[1]		Stroke Rate	Standard Valve	Max. Viscosity
	GPD	GPH	LPH	PSI	BAR	(SPM)	Size	(cps)
S2	12	0.50	1.9	250	17	250	J (Teflon Only)	1,000
S3	33	1.38	5.2	150	10			
S4	58	2.42	9.1	100	7		1	
C2	6	0.25	0.9	250	17	125	J (Teflon only)	
C3	10	0.42	1.6					
02	6	0.25	0.9	150	10			
03	12	0.50	1.9					
04	24	1.00	3.8	100	7			
64	30	1.25	4.7				1	
C4	48	2.00	7.6	50	3.3		3	

Controls

S	Manual, Control, Analog Adjustment	100:1 Turndown	10:1 Stroke Length 10:1 Frequency
E	External Pace w/ Auto/Manual Switch		
P	Stop Function Option		
X	Manual Control, Analog Adjustment (S2, S3 & S4 sizes only)	1000:1 Turndown	10:1 Stroke Length 100:1 Frequency

Electrical

A	115 VAC, 60Hz
B	230 VAC, 50-60Hz, 1 Ph, 6' (2m) cord with 3 prong US plug
1	115 VAC, 60Hz less Agency Approvals
2	230 VAC, 50-60Hz, 1 Ph, 6' (2m) cord, no plug, less Agency

Liquid End Configuration - Head & Valves / Seats & O-Rings / Check Balls

PHC	GFPPL / CSPE / Ceramic (150 PSI Max)[1]
PTC	GFPPL / TFE / Ceramic
VTC	PVC / TFE / Ceramic (150 PSI Max)[1]
WTC	PVC / TFE / Ceramic (models > 150 PSI Max); For use on S2, C2, C3
KTC	PVDF / TFE / Ceramic
VVC	PVC / Viton / Ceramic (Not available with J Valve) (150 PSI Max)[1]
VHC	PVC / CSPE / Ceramic (Not available with J Valve) (150 PSI Max)[1]
Other	See Page 6 for additional materials of construction

Connection Sizes

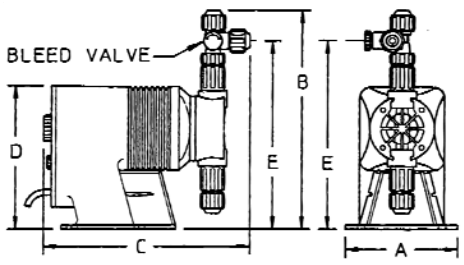
J	Tubing .25" I.D. x .38" O.D. Standard for pumps from 0 - 33 GPD
1	Tubing .25" I.D. x .38" O.D. Standard for pumps from 20 - 45 GPD
3	Tubing .38" I.D. x .50" O.D. Standard for pumps from 45 - 240 GPD
9	Degas Head: Vent Tubing .25" I.D. x .38" O.D. (0-150 PSI pumps only)
Metric	
R	G 1/2 A Threads, .25" Ball, 0-7.1 LPH
Y	Tubing 6 x 12mm, .25" Ball, 0-7.1 LPH
Other	See Page 7 for additional connection options

Options

XXX	StandardPump - No Options
130	PVDF Tubing
500	Five Function Valve
520	Five Function Degassing Valve
ITS	15 gal. ITS Tank System
CZXXX	CE Listed

Note 1:Pumps with rated pressure above 150 PSI will be de-rated to 150 PSI Max. when selecting these valve options.

Dimensions



Series A PLUS Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LB02 / S2	5.0	9.6	9.5	6.5	8.2	10
LBC2	5.0	9.9	9.5	6.5	8.5	10
LBC3	5.0	9.9	9.5	6.5	8.5	10
LB03 / S3	5.0	9.9	9.5	6.5	8.5	10
LB04 /S4	5.0	9.9	9.5	6.5	8.5	10
LB64	5.0	9.9	9.5	6.5	8.5	10
LBC4	5.0	9.9	9.5	6.5	8.5	10

NOTE: Inches X 2.54 = cm

PULSAtron®

Electronic Metering Pumps

Series C PLUS

Key Features

- ***Manual Control*** by on-line adjustable stroke rate and stroke length.
- ***Agency approved*** for demanding ***OUTDOOR*** and indoor applications.
- ***Highly Reliable*** timing circuit.
- ***Water Resistant*** excellent for ***OUTDOOR*** and indoor applications.
- ***Internally Dampened To Reduce Noise,*** very acceptable for household installations.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Premium Standard Wetted Component Materials.***
- ***Few Moving Parts*** and ***Wall Mountable.***
- ***Safe & Easy Priming*** with durable leak-free **bleed valve assembly** (standard).
- ***Optional Control:*** External pace with auto/manual selection.

Pressure and Flow Rate Capacity

MODEL		LD02	LD03	LD04	LD54
Capacity nominal (max.)	GPH	0.25	0.50	1.00	1.25
	GPD	6	12	24	30
	LPH	0.9	1.9	3.8	4.7
Pressure (max.)	PSIG	80	80	80	80
	BAR	5.6	5.6	5.6	5.6
Connections	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD			
	Piping	1/4" FNPT			

Engineering Data

Reproducibility:	+/- 3% at maximum capacity
Viscosity Max CPS:	1000 CPS
Stroke Frequency Max SPM:	125
Stroke Frequency Turn-Down Ratio:	10:1
Stroke Length Turn-Down Ratio:	10:1
Power Input:	115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph
Average Current Draw:	
@ 115 VAC; Amps:	0.6 Amps
@ 230 VAC; Amps:	0.3 Amps @ 230 VAC
Peak Input Power:	130 Watts
Average Input Power @ Max SPM:	50 Watts

PULSAtron Series C Plus Selection Guide

LD_ _ _ _ - _ _ _ - _ _ _

MODELS:	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 80 PSI (5.6 BAR)
	03	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 80 PSI (5.6 BAR)
	04	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 80 PSI (5.6 BAR)
	54	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 80 PSI (5.6 BAR)
CONTROLS:	**S**	= Manual
	E	= External Pacing w / Auto/Manual Switch
	G	= External Pacing w / Prime Button
	P	= Stop Function Option
ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PHC**	= GFPPL / CSPE / Ceramic
	PTC	= GFPPL / TFE / Ceramic
	KTC	= PVDF / TFE / Ceramic
	VHC	= PVC / CSPE / Ceramic
	VTC	= PVC / TFE / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	A	= Tubing .38" I.D. x .50" O.D. / .25" Ball, 0 - 1.88 GPH
	J	= Tubing, .25" I.D. x .38" O.D./ .19 Ball; 0 - 1.04 GPH
	METRIC:	
	R	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	Y	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

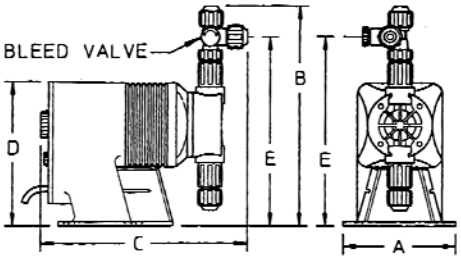
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.

SUFFIX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	ITS	= 15 gal. ITS Tank System
	CZXXX	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LD03SA-PTC1-XXX'

Dimensions



Series C PLUS Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LD02	5.0	9.6	9.5	6.5	8.2	10
LD03	5.0	9.9	9.5	6.5	8.5	10
LD04	5.0	9.9	9.5	6.5	8.5	10
LD54	5.0	9.9	9.5	6.5	8.5	10

NOTE: Inches X 2.54 = cm

PULSAtron®

Electronic Metering Pumps

Series C

Key Features

- ***Automatic Control*** by external pacing with prime switch (optional).
- ***Manual Control*** by on-line adjustable stroke length (fixed stroke rate).
- ***Liquid Low Level Option*** available to prevent loss of prime.
- ***Agency approved*** for demanding ***OUTDOOR*** and indoor applications.
- ***Highly Reliable*** timing circuit.
- ***Water Resistant*** excellent for ***OUTDOOR*** and indoor applications.
- ***Internally Dampened To Reduce Noise,*** very acceptable for household installations.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Premium Standard Wetted Component Materials.***
- ***Few Moving Parts*** and ***Wall Mountable.***
- ***Safe & Easy Priming*** with durable leak-free **bleed valve assembly** (standard).

Pressure and Flow Rate Capacity

MODEL		LC02	LC03	LC04	LC54
Capacity nominal (max.)	GPH	0.25	0.50	1.00	1.25
	GPD	6	12	24	30
	LPH	0.9	1.9	3.8	4.7
Pressure (max.)	PSIG	80	80	80	80
	BAR	5.6	5.6	5.6	5.6
Connections	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD			
	Piping	1/4" FNPT			

Engineering Data

Reproducibility: +/- 3% at maximum capacity
Viscosity Max CPS: 1000 CPS
Stroke Frequency Max SPM: 125
Stroke Length Turn-Down Ratio: 10:1
Power Input: 115 VAC/50-60 HZ/1 ph
230 VAC/50-60 HZ/1 ph

Average Current Draw:
@ 115 VAC; Amps: 0.6 Amps
@ 230 VAC; Amps: 0.3 Amps @ 230 VAC
Peak Input Power: 130 Watts
Average Input Power @ Max SPM: 50 Watts

PULSAtron Series C Selection Guide

LC_ _ _ _ - _ _ _ - _ _ _

MODELS:	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 80 PSI (5.6 BAR)
	03	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 80 PSI (5.6 BAR)
	04	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 80 PSI (5.6 BAR)
	54	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 80 PSI (5.6 BAR)
CONTROLS:	**S**	= Manual
	E	= External Pacing w / Auto/Manual Switch
	G	= External Pacing w / Prime Button
	P	= Stop Function Option
ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PHC**	= GFPPL / CSPE / Ceramic
	PTC	= GFPPL / TFE / Ceramic
	VHC	= PVC / CSPE / Ceramic
	VTC	= PVC / TFE / Ceramic
	VVC	= PVC / Viton / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	A	= Tubing .38" I.D. x .50" O.D. / .25" Ball, 0 - 1.88 GPH
	J	= Tubing, .25" I.D. x .38" O.D./ .19 Ball; 0 - 1.04 GPH
	METRIC:	
	P	= 4 x 6mm, .25" Ball, 0 - 3.94 LPH
	U	= 6 x 10mm, .25" Ball, 0 - 7.10 LPH

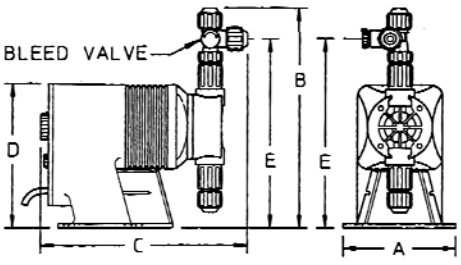
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.

SUFFIX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	ITS	= 15 gal. ITS Tank System
	CZXXX	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LC03SA-PTC1-XXX'

Dimensions



Series C Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LC02	5.0	9.6	9.5	6.5	8.2	10
LC03	5.0	9.9	9.5	6.5	8.5	10
LC04	5.0	9.9	9.5	6.5	8.5	10
LC54	5.0	9.9	9.5	6.5	8.5	10

NOTE: Inches X 2.54 = cm

PULSAtron® PLUS

Electronic Metering Pumps with Integrated Controller

Series CW

Conductivity Control with Water Meter Feed

The Series CW was designed to control conductivity and feed inhibitor in an open-air cooling tower. Chemical feed is initiated and controlled by input from a water meter. The Series CW combines everything you need to control conductivity and feed inhibitor into one unique, compact package to create a simple and cost effective metering and control system.

Principal of Operation

The Series CW includes a solenoid actuated metering pump, conductivity sensor, bleed relay and a dry contact input for water meter control. At set-up, the operator sets the conductivity set point, differential (or dead-band), the pump stroke frequency and run time. When conductivity reaches the set point, the system activates the bleed relay.

As make-up water passes through the water meter, it generates a series of pulses based on the volume of flow. The pump counts the pulses until the total reaches the Count set point. The pump runs at the frequency and run-time specified at set-up and the count is reset.

Features

- 120VAC or 250VAC @ 50/60 HZ, 5A max
- 4-electrode conductivity input
- 0-6000 mS/cm ± 1%, temperature compensated
- Relay rated to 5A at 240VAC
- Isolated dry contact flow switch input
- Isolated dry contact water meter input
- 4 Digit LED, 9 key membrane keypad
- Single-button function keys
- Set, Differential, Calibration, Pulse Timer, and Count functions
- Stroke rate adjusts 0-100% in 1% increments, turndown ratio 100:1

Pressure and Flow Rate Capacity

MODEL		LW02	LW03	LW04	LW64
Capacity nominal (max.)	GPH	0.25	0.50	1.00	1.25
	GPD	6	12	24	30
	LPH	0.9	1.9	3.8	4.7
Pressure (max.)	PSIG	150	150	100	100
	BAR	10	10	7	7

Engineering Data

Reproducibility: +/- 2% at maximum capacity
Controls: 9 key membrane keypad, Single button function keys
Conductivity Sensor: 4 electrode
Conductivity Range: 0-6000 µS/cm +/- 1%, Temperature Compensated
Input: Isolated Dry Contact Flow Switch
Isolated Dry Contact Water Meter
Functions: Set, Differential, Calibration, and Pulse Timer and Count Function
Status Display: 4 Digit LED
Stroke Frequency Turn-Down Ratio: 100:1
Stroke Length Turn-Down Ratio: 100:1
Relay Ratings: 5A at 240 VAC
Power Input: 115 VAC/50-60 HZ/1 ph
230 VAC/50-60 HZ/1 ph
5 Amp max

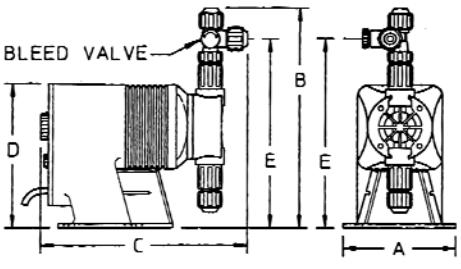
PULSAtron Series CW Selection Guide

LW_ _ _ _ - _ _ _ - _ - _ - _ - _ _ _

MODELS:	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	03	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	04	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	64	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
CONTROLS:	**R**	= Rising Set Point (standard)
	F	= Falling Set Point
ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PHC**	= GFPPL / CSPE / Ceramic
	PTC	= GFPPL / TFE / Ceramic
	PVC	= GFPPL / Viton / Ceramic
	KTC	= PVDF / TFE / Ceramic
	VHC	= PVC / CSPE / Ceramic
	VTC	= PVC / TFE / Ceramic
See page 6 for additional liquid end materials.		
CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	9	= Degas Head: .25" I.D. x .38" O.D. / 0-1.83 GPH
	J	= Tubing, .25" I.D. x .38" O.D. / .19 Ball; 0 - 1.04 GPH
	METRIC:	
	R	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	Y	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.		
SENSOR:	**2**	= Stainless Steel with 8.5 ft. cable
	3	= Stainless Steel with 25 ft. cable
	4	= Carbon Graphite with 8.5 ft. cable
	5	= Carbon Graphite with 25 ft. cable
FLOW:	**X**	= No Flow
	A	= Flow Switch 3/4"" with 8.5 ft. cable and 3"" nipple
	B	= Flow Switch 3/4"" with 25 ft. cable and 3"" nipple
	C	= Flow Assembly with 8.5 ft. cable
	D	= Flow Assembly with 25 ft. cable
SUFFX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	CZXXX	= CE Approval (5 digits used for this suffix code)
See pages 9, 10 & 11 for additional information and specs.		

A completed model number should look like 'LW03RA-PTC1-2A-XXX'

Dimensions



Series CW Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight (lbs.)
LW02	5.0	9.6	9.5	6.5	8.2	13
LW03	5.0	9.9	9.5	6.5	8.5	13
LW04	5.0	9.9	9.5	6.5	8.5	13
LW64	5.0	9.9	9.5	6.5	8.5	13

NOTE: Inches X 2.54 = cm

PULSAtron® PLUS

Electronic Metering Pumps with Integrated Controller

Series CL

Conductivity Control with Limit Timer

The Series CL was designed to control conductivity and feed inhibitor in an open-air cooling tower. The Series CL combines everything you need to control conductivity and feed inhibitor into one unique, compact package to create a simple and cost effective metering and control system.

Principle of Operation

The Series CL includes a conductivity sensor, bleed relay and a user programmable limit timer. When conductivity reaches the user specified level, the system activates the bleed relay and begins pumping inhibitor. The 'feed & bleed ' cycle will continue until the conductivity returns to the desired level. The programmable limit timer allows the user to specify a maximum pumping time for the feed cycle. If the limit time expires before the conductivity level returns to the set range, the pump stops feeding while the bleed continues. Once the conductivity level is reached and the system stops bleeding, the feed limit timer is automatically reset for the next bleed cycle.

Features

- 120VAC or 250VAC @ 50/60 HZ, 5A max
- 4-electrode conductivity input
- 0-6000 mS/cm ± 1%, temperature compensated
- Relay rated to 5A at 240VAC
- Isolated dry contact flow switch input
- 4 Digit LED, 9 key membrane keypad
- Single-button function keys
- Set, Differential, Calibration, Pulse Timer, and Count functions
- Stroke rate adjusts 0-100% in 1% increments, turndown ratio 100:1

Pressure and Flow Rate Capacity

MODEL		LL02	LL03	LL04	LL64
Capacity nominal (max.)	GPH	0.25	0.50	1.00	1.25
	GPD	6	12	24	30
	LPH	0.9	1.9	3.8	4.7
Pressure (max.)	PSIG	150	150	100	100
	BAR	10	10	7	7

Engineering Data

Reproducibility: +/- 2% at maximum capacity
Controls: 9 key membrane keypad, Single button function keys
Conductivity Sensor: 4 electrode
Conductivity Range: 0-6000 µS/cm +/- 1%, Temperature Compensated
Input: Isolated Dry Contact Flow Switch
Functions: Set, Differential, Calibration, and Pulse Timer
Status Display: 4 Digit LED
Stroke Frequency Turn-Down Ratio: 100:1
Stroke Length Turn-Down Ratio: 100:1
Power Input: 115 VAC/50-60 HZ/1 ph
230 VAC/50-60 HZ/1 ph
5 Amp max

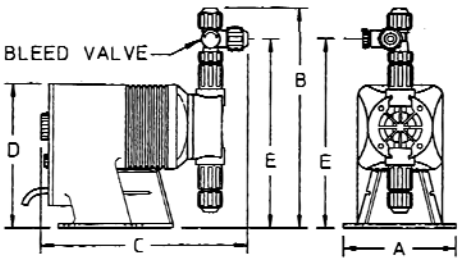
PULSAtron Series CL Selection Guide

LL_ _ _ - _ _ _ - _ _ _ - _ _ _

MODELS:	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	03	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	04	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	64	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
CONTROLS:	**R**	= Rising Set Point (standard)
	F	= Falling Set Point
ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PHC**	= GFPPL / CSPE / Ceramic
	PTC	= GFPPL / TFE / Ceramic
	PVC	= GFPPL / Viton / Ceramic
	KTC	= PVDF / TFE / Ceramic
	VHC	= PVC / CSPE / Ceramic
	VTC	= PVC / TFE / Ceramic
See page 6 for additional liquid end materials.		
CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	9	= Degas Head: .25" I.D. x .38" O.D. / 0-1.83 GPH
	J	= Tubing, .25" I.D. x .38" O.D. / .19 Ball; 0 - 1.04 GPH
	METRIC:	
	R	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	Y	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.		
SENSOR:	**2**	= Stainless Steel with 8.5 ft. cable
	3	= Stainless Steel with 25 ft. cable
	4	= Carbon Graphite with 8.5 ft. cable
	5	= Carbon Graphite with 25 ft. cable
FLOW:	**X**	= No Flow
	A	= Flow Switch 3/4"" with 8.5 ft. cable and 3"" nipple
	B	= Flow Switch 3/4"" with 25 ft. cable and 3"" nipple
	C	= Flow Assembly with 8.5 ft. cable
	D	= Flow Assembly with 25 ft. cable
SUFFX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	CZXXX	= CE Approval (5 digits used for this suffix code)
See pages 9, 10 & 11 for additional information and specs.		

A completed model number should look like 'LL03RA-PTC1-2A-XXX'

Dimensions



Series CL Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight (lbs.)
LL02	5.0	9.6	9.5	6.5	8.2	13
LL03	5.0	9.9	9.5	6.5	8.5	13
LL04	5.0	9.9	9.5	6.5	8.5	13
LL64	5.0	9.9	9.5	6.5	8.5	13

NOTE: Inches X 2.54 = cm

PULSAtron® PLUS

Electronic Metering Pumps with Integrated Controller

Sereis WT

Water Meter Feed & Bleed Control

The Series WT was designed to control the feed and bleed cycle in an open-air cooling tower. The feed and bleed cycle is initiated and controlled by input from a water meter. The Series WT combines everything you need to bleed off the tower and feed inhibitor into one unique, compact package to create a simple and cost effective metering and control system.

Principal of Operation

The Series WT includes a water meter input with programmable pulse timers that control the feed and bleed relays. When the water level in the cooling tower drops, the make-up water is turned on creating flow through the water meter. As make-up water passes through the water meter, it generates a series of pulses based on the volume of flow.

The Series WT has two pulse counters with independent set points that monitors output of the water meter. One controls the pump and one controls the bleed relay. When the count exceeds the set point, the counter is reset and the control function is activated for the run-time specified at set-up.

Features

- 120VAC or 250VAC @ 50/60 HZ, 5A max
- Relay rated to 5A at 240VAC
- Isolated dry contact flow switch input
- Isolated dry contact water meter input
- 4 Digit LED, 9 key membrane keypad
- Single-button function keys
- Pump and bleed timers, pump and bleed counters
- Stroke rate adjusts 0-100% in 1% increments, turndown ratio 100:1

Pressure and Flow Rate Capacity

MODEL		LQ02	LQ03	LQ04	LQ64
Capacity	GPH	0.25	0.50	1.00	1.25
nominal	GPD	6	12	24	30
(max.)	LPH	0.9	1.9	3.8	4.7
Pressure	PSIG	150	150	100	100
(max.)	BAR	10	10	7	7

Engineering Data

Reproducibility: +/- 2% at maximum capacity
Controls: 9 key membrane keypad, Single button function keys
Conductivity Sensor: 4 electrode
Conductivity Range: 0-6000 µS/cm +/- 1%, Temperature Compensated
Input: Isolated Dry Contact Flow Switch
Isolated Dry Contact Water Meter
Functions: Pump and Bleed Timers, Pump and Bleed Counters
Status Display: 4 Digit LED
Stroke Frequency Turn-Down Ratio: 100:1
Stroke Length Turn-Down Ratio: 100:1
Relay Ratings: 5A at 240 VAC
Power Input: 115 VAC/50-60 HZ/1 ph
230 VAC/50-60 HZ/1 ph
5 Amp max

PULSAtron Series WT Selection Guide

LQ_ _ X _ - _ _ _ _ - X _ - _ _ _

MODELS:	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	03	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	04	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	64	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
CONTROLS:	**X**	= No options Available
ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PHC**	= GFPPL / CSPE / Ceramic
	PTC	= GFPPL / TFE / Ceramic
	PVC	= GFPPL / Viton / Ceramic
	KTC	= PVDF / TFE / Ceramic
	VHC	= PVC / CSPE / Ceramic
	VTC	= PVC / TFE / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	9	= Degas Head: .25" I.D. x .38" O.D. / 0-1.83 GPH
	J	= Tubing, .25" I.D. x .38" O.D. / .19 Ball; 0 - 1.04 GPH
	METRIC:	
	R	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	Y	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

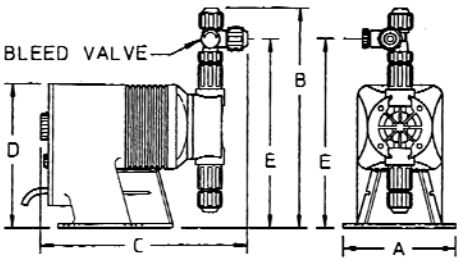
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.

SENSOR:	**X**	= No Options Available
FLOW:	**X**	= No Flow
	A	= Flow Switch 3/4"" with 8.5 ft. cable and 3"" nipple
	B	= Flow Switch 3/4"" with 25 ft. cable and 3"" nipple
	C	= Flow Assembly with 8.5 ft. cable
	E	= Flow Assembly with 25 ft. cable
SUFFX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	CZXXX	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LQ03XA-PTC1-XA-XXX'

Dimensions



Series WT Dimensions (inches)

Model No.	A	B	C	D	E	Shipping Weight (lbs.)
LQ02	5.0	9.6	9.5	6.5	8.2	13
LQ03	5.0	9.9	9.5	6.5	8.5	13
LQ04	5.0	9.9	9.5	6.5	8.5	13
LQ64	5.0	9.9	9.5	6.5	8.5	13

Note: Inches x 2.54 = cm

PULSAtron® PLUS

Electronic Metering Pumps with Integrated Controller

Series ET

Feed Control with Water Meter Input

The Series ET was designed to feed chemical in response to a water meter input. Typical applications include inhibitor feed for an open air-cooling tower. The Series ET provides everything you need in one unique, compact package to create a simple and cost effective metering system.

Principal of Operation

The Series ET counts pulses from a water meter. When the count exceeds a set value (either 1 or 10), the pump starts. The pump will continue to run for an adjustable time period. There are two time ranges – either 2 to 200 seconds or 12 seconds to 20 minutes. The setting is made by selecting a time base value (200 seconds or 20 minutes) and then setting the time base percentage from 1 to 100%.
Other control features include a standby mode, continuous 'ON' mode and the ability to adjust the stroke length from 0 – 100%.
The pump includes both input and output water meter connections at the front panel. The output connection provides an isolated dry contact output of the water meter contact to operate additional pumps or timers off the same water meter.

Features

- Isolated from Earth Ground
- 120VAC or 250VAC @ 50/60 HZ, 5A max
- Isolated Dry Contact (Water Meter)
- Isolated Dry Contact (Water Meter)
- Mode Select Knob, Stroke Length, Stroke Rate
- Standby, On, 200 sec/count, 200 sec/10 count, 20 min/count and 20 min/10 count
- Stroke rate and stroke length adjust 0-100% in 1% increments. Frequency turn-down ratio 100:1.
- Agency approved for demanding ***OUTDOOR*** and indoor applications

Pressure and Flow Rate Capacity

MODEL		LTB2	LTA2	LTB3	LTA3	LTF4	LTD4	LTB4	LTH4	LTG4	LTE4	LTH5	LTH6	LTH7	LTH8
Capacity	GPH	0.21	0.25	0.50	0.50	0.85	0.90	1.00	1.70	1.75	1.85	3.15	5.00	10.00	21
nominal	GPD	5	6	12	12	20	22	24	41	42	44	76	120	240	504
(max.)	LPH	0.8	0.9	1.9	1.9	3.2	3.4	3.8	6.4	6.6	7.0	11.9	18.9	37.9	79.5
Pressure	PSIG	250	150	150	100	250	150	100	250	150	100	150	100	35	20
(max.)	BAR	17	10	10	7	17	10	7	17	10	7	10	7	2.4	1.3

Engineering Data

Reproducibility: +/- 2% at maximum capacity

Controls:

Standby	On
200 sec/count	200 sec/10 count
20 min/count	20 min/10 count

Stroke Frequency Turn-Down Ratio: 100:1

Stroke Length Turn-Down Ratio: 100:1

Power Input: 120 VAC/50-60 HZ/1 ph
250 VAC/50-60 HZ/1 ph
5 Amp max

PULSAtron Series ET Selection Guide

LT_ _ | S | _ - _ _ _ | _ - _ _ _

MODELS:	**B2**	= 0.21 gph / 5 gpd (0.8 lph) max pres.: 250 PSI (17 BAR)
	F4	= 0.85 gph / 20 gpd (3.2 lph) max pres.: 250 PSI (17 BAR)
	H4	= 1.70 gph / 41 gpd (6.4 lph) max pres.: 250 PSI (17 BAR)
	A2	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	B3	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	D4	= 0.90 gph / 22 gpd (3.4 lph) max pres.: 150 PSI (10 BAR)
	G4	= 1.75 gph / 42 gpd (6.6 lph) max pres.: 150 PSI (10 BAR)
	H5	= 3.15 gph / 76 gpd (11.9 lph) max pres.: 150 PSI (10 BAR)
	A3	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 100 PSI (7 BAR)
	B4	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	E4	= 1.85 gph / 44 gpd (7.0 lph) max pres.: 100 PSI (7 BAR)
	H6	= 5.00 gph / 120 gpd (18.9 lph) max pres.: 100 PSI (7 BAR)
	H7	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 35 PSI (2.4 BAR)
	H8	= 21.0 gph / 504 gpd (79.5 lph) max pres.: 20 PSI (1.3 BAR)

CONTROLS:	**S**	= Manual On/Off

ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)

LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PTC**	= GFPPL / TFE / Ceramic
	PTT	= GFPPL / TFE / TFE
	KTC	= PVDF / TFE / Ceramic (Consult factory for H8)
	VHC	= PVC / CSPE / Ceramic
	VTC	= PVC / TFE / Ceramic (models <= 150 psi excluding H7, H8, K7)
	WTC	= PVC / TFE / Ceramic (models > 150 psi and H7, H8, K7)
	ATS	= 316 S.S. / TFE / 316 S.S. (must use FNPT piping connection)

See page 6 for additional liquid end materials.

CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	3	= Tubing .38" I.D. x .50" O.D. / .38" Ball, 1.63 - 10 GPH
	4	= Piping .25" FNPT / .38" Ball, 1.63 - 10 GPH
	B	= Tubing .50" I.D. x .75" O.D. / .50" Ball, 21 GPH only
	METRIC:	
	M	= G 1/2 A Threads, .38" Ball, 6.15 - 37.85 LPH
	R	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	Y	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

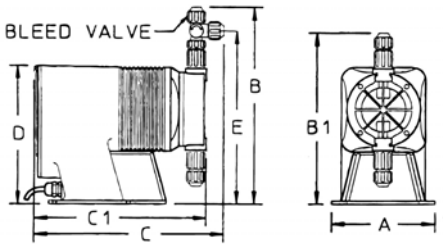
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.

SUFFIX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	ITS	= 15 gal. ITS Tank System (ITS Tank not available on LM, LP, LT, and LE: H4, H5, H6, H7, H8, J7, K7 models)
	CZXXX	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LTA3SA-PTC1-XXX'

Dimensions



Series ET Dimensions (inches)								
Model No.	A	B	B1	C	C1	D	E	Shipping Weight
LTA2	5.4	10.3	-	10.8	-	7.5	8.9	13
LTA3	5.4	10.6	-	10.7	-	7.5	9.2	13
LTB2	5.4	10.3	-	10.8	-	7.5	8.9	13
LTB3	5.4	10.6	-	10.7	-	7.5	9.2	13
LTB4	5.4	10.6	-	10.7	-	7.5	9.2	13
LTD4	5.4	10.6	-	11.2	-	7.5	9.2	15
LTE4	5.4	10.6	-	11.2	-	7.5	9.2	15
LTF4	5.4	10.6	-	11.7	-	7.5	9.2	18
LTG4	5.4	10.6	-	11.7	-	7.5	9.2	18
LTH4	6.1	10.9	-	11.2	-	8.2	9.5	21
LTH5	6.1	11.3	-	11.2	-	8.2	9.9	21
LTH6	6.1	11.3	-	11.2	-	8.2	9.9	21
LTH7	6.1	11.7	-	11.2	-	8.2	10.3	21
LTH8 *	6.1	-	10.9	-	10.6	8.2	-	25

NOTE: Inches X 2.54 = cm

* the LPH8 is designed without a bleed valve available

PULSAtron® PLUS

Electronic Metering Pumps with Integrated Controller

Series T7

Feed Control with 7 Day Timer

The Series T7 was designed to feed chemical products on a timed schedule. Typical applications include the feed of biocides in open-air cooling towers. The feed cycle is initiated and controlled by the programmable timer. The Series T7 provides everything you need in one unique, compact package to create a simple and cost effective metering system for timed applications.

Principal of Operation

The Series T7 is controlled by a 7-day programmable timer. The timer is programmable in 1-minute increments with up to 8 on/off cycles per day. Each timed event can be set to run any day of the week on a 7-day cycle.

Other control features include a standby mode, continuous 'ON' mode and the ability to adjust the stroke length from 0 – 100%.

Features

- Isolated from Earth Ground
- 120VAC or 250VAC @ 50/60 HZ, 5A max
- Mode Select Knob, Stroke Length, Stroke Rate
- 12, 22, 30 & 44 GPD @ 100 psi – 7 bar
- Stroke length adjust 0-100% in 1% increments.Turn down ratio 10:1

Pressure and Flow Rate Capacity

MODEL		LC13BA	LC14BA	LC64BA	LC44BA
Capacity	GPH	0.50	1.00	1.25	2.00
nominal	GPD	12	24	30	48
(max.)	LPH	1.9	3.8	4.7	7.6
Pressure	PSIG	100	100	100	50
(max.)	BAR	7	7	7	3.3

Engineering Data

Reproducibility: +/- 3% at maximum capacity
Stroke Length Turn-Down Ratio: 10:1
Power Input: 115 VAC/50-60 HZ/1 ph
230 VAC/50-60 HZ/1 ph

Average Current Draw:
@ 115 VAC; Amps: 0.6 Amps
@ 230 VAC; Amps: 0.3 Amps @ 230 VAC

7-Day Timer

Solid-state 7-day electronic timer for easy adjustment of metering schedules and feed rates. Manual control allows for easy priming and start-up. The timer is programmable in 1 minute increments, with up to 8 events per day.

PULSAtron Series T7 Selection Guide

LC_ _ | B | _ - _ _ _ | _ - _ _ _

MODELS:	**13**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 100 PSI (7 BAR)
	14	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	64	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
	44	= 2.00 gph / 48 gpd (7.6 lph) max pres.: 50 PSI (3.3 BAR)
CONTROLS:	**B**	= No Options Available
ELECTRICAL:	**A**	= 115 Volt / 50-60Hz
	1	= 115 Volt / 50-60Hz (without agency approvals)
	B	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	2	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PHC**	= GFPPL / CSPE / Ceramic
	PTC	= GFPPL / TFE / Ceramic
	KTC	= PVDF / TFE / Ceramic
	VHC	= PVC / CSPE / Ceramic
	VTC	= PVC / TFE / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	9	= Degas Head: .25" I.D. x .38" O.D. / 0-1.83 GPH
	J	= Tubing, .25" I.D. x .38" O.D. / .19 Ball; 0 - 1.04 GPH
	METRIC:	
	Y	= 6 x 12mm, .25"" Ball, 0 - 7.10 LPH
	T	= 6 x 10mm, Degassing (Note: has 10mm suction), 0 - 7.10 LP

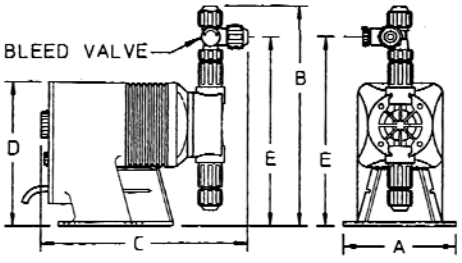
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer assy., injection valve and bleed valve.

SUFFIX CODES:	**XXX**	= No Additional Options
	130	= PVDF Tubing
	500	= Five Function Valve
	520	= Five Function Degas Valve
	ITS	= 15 gal. ITS Tank System
	CZXXX	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LC13BA-PTC1-XXX'

Dimensions



Series T7 Dimensions (inches						
Model No.	A	B	C	D	E	Shipping Weight
LC13BA	5.0	9.6	9.5	6.5	8.2	10
LC14BA	5.0	9.9	9.5	6.5	8.5	10
LC64BA	5.0	9.9	9.5	6.5	8.5	10
LC44BA	5.4	10.6	11.3	7.4	9.2	11.8

NOTE: Inches X 2.54 = cm

PULSAtron® *KOPkits*

Selecting a KOPkit:

All KOPkit model strings begin with the letter K. The remainder of the string can be determined by knowing your pump model.

When you select your KOPkit, you will need to build the model number based on the pump model string that you purchased. The two pieces of information you need are the head size and the wet-end code, which is part of the model string of the pump.

The pump head size is the fourth digit in the pump model number.

LB0**2**SA-PTC1-XXX

The 2 represents your pump head size.

Digits 7-20 in the pump model string represent the wet-end code. It is the group of four digits set apart by the dash lines.

LB02SA-**PTC1**-XXX

These four digits represent your wet-end code.

In the following selection guide, you will break down your wet-end code into the four parts to get your total price for the KOPkit. The four digits in the wet-end code represent the Head Material, Seats & O-Rings, Ball Material and Connection Type. Using the above example, the code breaks down as follows:

P - Head Material, including fittings. In this example, the P represents GFPPL.
T - Seat & O-Ring Material. In this example, the T represents Teflon.
C - Types of Balls used in the valves. In this example, the C represents Ceramic.
1 - Connection type. In this example, the 1 represents tubing connections for 3/8” OD tubing.

The completed KOPkit number for the above example is:

K2PTC1

Note: If you do not find your connection size in the following selection guide, please consult the factory for accurate pricing. Our philosophy with the PULSAtron product line is to make it as flexible as our customers need it to be.

PULSAtron KOPkit Selectio

K_ _ _ _ _

HEAD SIZE The digits 2-8 following the K represents the pump head size. This is represented by the fourth digit in the pump model string.	**2** = **3** = **4** = **5** = **6** = **7** = **8** = (Applies to WTCB only-for other options Consult factory)
HEAD MATERIALS	**A** = 316 Stainless Steel **K** = PVDF (Kynar) **P** = GFPPL (Polypropylene) **V** = PVC (Poly Vinyl Chloride) (models <= 150 psi excluding H7, H8, K7) **W** = PVC (models > 150 psi and H7, H8, K7)
SEATS/O-RINGS	**H** = CSPE **V** = Viton **T** = TFE
BALLS	**T** = TFE **C** = Ceramic **S** = 316 Stainless Steel **H** = Alloy C (Hastelloy)

CONNECTION TYPE

	Type	Suction	Discharge	Spring	
1	= Tubing	.25" x .38"	.25" x .38"		
2	= Piping	.25" FNPT	.25" FNPT		
3	= Tubing	.38" x .50"	.38" x .50"		
4	= Piping	.25" FNPT	.25" FNPT		
5	= Tubing	.50" x .75"	.38" x .50"	Yes	
6	= Piping	.25" FNPT	.25" FNPT	Yes	
7	= Tubing	.50" x .75"	.50" FNPT	Yes	
8	= Piping	.50" FNPT	.50" FNPT	Yes	
9	= Tubing	25" x .38"	.25" x .38"	Yes	Degas
A	= Tubing	.38" x .50"	.38" x .50"		
B	= Tubing	.50" x .75"	.50" x .75"		
C	= Piping	.50" FNPT	.50" FNPT		
D	= Tubing	.25" x .38"	.25" x .38"	Yes	
E	= Tubing	.38" x .50"	.38" x .50"	Yes	
F	= Tubing	.38" x .50"	.38" x .50"	Yes	
G	= Piping	.25" FNPT	.25" FNPT	Yes	
I	= Piping	.50" MNPT	.50" MNPT	Yes	
J	= Tubing	25" x .38"	.25" x .38"		
K	= Tubing	.50" x .75"	.50" x .75"	Yes	
L	= Piping	.50" MNPT	.50" MNPT		
M	= Piping	G 1/2 A	G 1/2 A		
N	= Tubing	4 x 10 mm	4 x 10 mm		
P	= Tubing	4 x 6 mm	4 x 6 mm		
Q	= Tubing	10 x 14 mm	10 x 14 mm		
R	= Piping	G 1/2 A	G 1/2 A		
S	= Tubing	6 x 10 mm	6 x 10 mm		
T	= Tubing	6 x 10 mm	6 x 10 mm		Degas
U	= Tubing	6 x 10 mm	6 x 10 mm		
V	= Tubing	12 x 19 mm	12 x 19 mm		
W	= Tubing	10 x 16 mm	10 x 16 mm		
Y	= Tubing	6 x 12 mm	6 x 12 mm		
X	= Piping	.50" MNPT	.50" MNPT		

PULSAtron®

Suction/Discharge Valves

Suction/Discharge Valve Selection Guide

L3_ _ _ _ _ _ _ - _ _ _

VALVE TYPE:	**101**	= Suction Valve
	201	= Discharge Valve
SEATS:	**H**	= CSPE
	V	= Viton
	T	= TFE
BALLS:	**T**	= TFE
	C	= Ceramic
	S	= 316 Stainless Steel
	H	= Alloy C (Hastelloy)
CONNECTION TYPE:	**1**	= Double Balls when TFE seats selected
	2	= Double Balls when TFE seats selected
	3	= Double Balls when TFE seats selected
	4	= Double Balls when TFE seats selected
	5*	= Available for Discharge Only (L3201)
	6	=
	7*	= Available for Suction Only (L3101)
	8	=
	A	=
	B*	=
	C	=
	D	= Spring Loaded with SS Balls
	E	= Spring Loaded with SS Balls
	F	= Spring Loaded with SS Balls
	G	= Spring Loaded with SS Balls
	I	=
	J	=
	K*	=
	L	=
	M	=
	N	=
	P	=
	Q	=
	R	=
	S	=
	U	=
	V*	=
	W	=
	Y	=
	X	=
MATERIALS OF CONSTRUCTION:	**FPP**	= Glass Filled Polypropylene
	PVC	= Poly Vinyl Chloride
	PVD	= Kynar
	316	= 316 Stainless Steel

* Available with Ceramic Balls and PVC Body Only - Consult factory for pricing on other options

LIQUID END COMPONENTS

tem No.	Part No.	Description	
1	L0200200-316	HEAD, PUMP	.750
1	L0200200-FPF	HEAD, PUMP	.750
1	L0200900-FPF	HEAD, PUMP HSA #2 HEAD J	.750
1	L0200900-PVC	HEAD, PUMP HSA #2 HEAD J	.750
1	L0200200-PVI	HEAD, PUMP HSA #2 HEAD J	.750
1	L0200300-316	HEAD, PUMP	1.000
1	L0200300-FPF	HEAD, PUMP	1.000
1	L0202500-HPV	HEAD, PUMP	1.000
1	L0200300-PVI	HEAD, PUMP	1.000
1	L0200300-PVC	HEAD, PUMP	1.000
1	L0201000-FPF	HEAD, PUMP HSA #3 HEAD J	1.000
1	L0201000-PVC	HEAD, PUMP HSA #3 HEAD J	1.000
1	L0201000-PVI	HEAD, PUMP HSA #3 HEAD J	1.000
1	L0200400-316	HEAD, PUMP	1.250
1	L0200400-FPF	HEAD, PUMP	1.250
1	L0200400-PVC	HEAD, PUMP	1.250
1	L0200400-PVI	HEAD, PUMP	1.250
1	L0200500-SST	HEAD, PUMP	1.625
1	L0200500-FPF	HEAD, PUMP	1.625
1	L0200500-PVC	HEAD, PUMP	1.625
1	L0200500-PVI	HEAD, PUMP	1.625
1	L0200600-SST	HEAD, PUMP	2.000
1	L0200600-FPF	HEAD, PUMP	2.000
1	L0200600-PVC	HEAD, PUMP	2.000
1	L0200600-PVI	HEAD, PUMP	2.000
1	L0200700-316	HEAD, PUMP	2.500
1	L0200700-FPF	HEAD, PUMP	2.500
1	L0200700-HPV	HEAD, PUMP	2.500
1	L0200700-PVI	HEAD, PUMP	2.500
1	L0200800-PPL	HEAD, PUMP	3.625
1	L0200800-HPV	HEAD, PUMP	3.625
2	L0300900-THY	DIAPHRAGM	.750
2	L0301000-THY	DIAPHRAGM	1.000
2	L0301100-THY	DIAPHRAGM	1.250
2	L0301200-THY	DIAPHRAGM	1.625
2	L0301300-THY	DIAPHRAGM	2.000
2	L0301400-THY	DIAPHRAGM	2.500
2	L0301600-THY	DIAPHRAGM	3.625
18	L1501300-HYI	SUC/DIS VLV O-RING, CSPE	
18	L1501300-TFE	SUC/DIS VLV O-RING, TFE	
18	L1501300-VTI	SUC/DIS VLV O-RING, VTN	
24	L1103400-PVC	COUPLING NUT 5/16" OD	
24	L1100300-FPF	COUPLING NUT 3/8" OD	
24	L1100300-PVC	COUPLING NUT 3/8" OD	
24	L1100300-PVI	COUPLING NUT 3/8" OD	
24	L1100400-FPF	COUPLING NUT 1/2" OD	
24	L1100400-PVC	COUPLING NUT 1/2" OD	
24	L1100400-PVI	COUPLING NUT 1/2" OD	
25	L9906700-000	WEIGHT, CERAMIC TUBE	
36	L1501200-TFE	BLEED VLV O-RING, TFE	
60	L1500700-NTF	SECONDARY SEAL, O-RING 2-109	

DRIVE END COMPONENTS

tem No.	Part No.	Description	
3	L2100200-FPF	DEFLECTION PLATE	.750
3	L2100300-FPF	DEFLECTION PLATE	1.000
3	L2100400-FPF	DEFLECTION PLATE	1.250
3	L2100500-FPF	DEFLECTION PLATE	1.625
3	L2100600-FPF	DEFLECTION PLATE	2.000
3	L2100700-FPF	DEFLECTION PLATE	2.500
4	L0400200-FPF	ADAPTER, .750	HSG #2
4	L0400300-FPF	ADAPTER, 1.000	HSG #2
4	L0400400-FPF	ADAPTER, 1.250	HSG #2
4	L0400500-FPF	ADAPTER, 1.625	HSG #2
4	L0400600-FPF	ADAPTER, 1.250	HSG #3
4	L0400700-FPF	ADAPTER, 1.625	HSG #3
4	L0400800-FPF	ADAPTER, 2.000	HSG #3
4	L0400900-FPF	ADAPTER, 2.500	HSG #3
4	L0401100-FPF	ADAPTER, .750	HSG #1
4	L0401200-FPF	ADAPTER, 1.000	HSG #1
4	L0401300-FPF	ADAPTER, 1.250	HSG #1
4	L0401400-PPL	ADAPTER, 3.625	HSG #3
5	L9901200-BRS	SHIM, DIAPHRAGM	
6	L1500400-NTF	EPM/ADAPTER O-RING	
6	L1500600-NTF	EPM/ADAPTER O-RING (ALL H PUMPS)	
7	L9801700-188	#10-32 X 2.62 PAN HEAD, PHILLIPS LP_2-4	
7	L9801800-188	.25-20 X 2.62 PAN HEAD, PHILLIPS LP_5-7	
7	L9803400-188	.25-20 X 2.00 PAN HEAD	LP_8
7	L9803300-188	#10-32 X 2.00 PAN HEAD	316SS
8	L9801300-188	#10 REG FLAT WASHER	LP_2-4
8	L9801400-188	.25 REG FLAT WASHER	LP_5-8
50	L0100100-115	EPM A, B, K2, 3	115V
50	L0100100-230	EPM A, B, K2, 3	230V

DRIVE END COMPONENTS

Item No.	Part No.	Description	
50	L0100200-115	EPM D, E, LE33, 34, 44	115V
50	L0100200-230	EPM D, E, LE33, 34, 44	230V
50	L0100300-115	EPM F, G, K5	115V
50	L0100300-230	EPM F, G, K5	230V
50	L0100400-115	EPM H7, K7	115V
50	L0100400-230	EPM H7, K7	230V
50	L0100500-115	EPM LC, LD54 and LB64	115V
50	L0100500-230	EPM LC, LD54 and LB64	230V
50	L0100600-115	EPM LE 2, 3, 12, 13, 14	115V
50	L0100600-230	EPM LE 2, 3, 12, 13, 14	230V
50	L0100200-012	EPM LS44	12VDC
50	L0100600-012	EPM LS 2, 13, 14	12VDC
51	L0500100-080	HOUSING #3	.080 STRK
51	L0501100-040	HOUSING #2	.040 STRK
51	L0501100-080	HOUSING #2	.080 STRK
51	L0500300-040	HOUSING #1	.040 STRK
51	L0500300-080	HOUSING #1	.080 STRK
52	L0700101-125	CNTRL BD, A-B-D-E SIZE SLD	115V
52	L0700102-125	CNTRL BD, A-B-D-E SIZE SLD	230V
52	L0700201-125	CNTRL BD, EXT/STOP; A, B, D, E	115V
52	L0700202-125	CNTRL BD, EXT/STOP; A, B, D, E	230V
52	L0700401-125	CNTRL BD, 4-20MA/STOP; A, B, D, E	115V
52	L0700402-125	CNTRL BD, 4-20MA/STOP; A, B, D, E	230V
52	L0700501-150	CNTRL BD, F-G SIZE SLD	115V
52	L0700502-150	CNTRL BD, F-G SIZE SLD	230V
52	L0700501-200	CNTRL BD, H-K SIZE SLD	115V
52	L0700502-200	CNTRL BD, H-K SIZE SLD	230V
52	L0709401-220	CNTRL BD, LEH8	115V
52	L0709402-220	CNTRL BD, LEH8	230V
52	L0709101-220	CNTRL BD, LVH7, LP/LVH8	115V
52	L0709102-220	CNTRL BD, LVH7, LP/LVH8	230V
52	L0700801-150	CNTRL BD, EXT/STOP; F, G	115V
52	L0700802-150	CNTRL BD, EXT/STOP; F, G	230V
52	L0700801-200	CNTRL BD EXT/STOP H SIZE SLD	115V
52	L0700802-200	CNTRL BD EXT/STOP H SIZE SLD	230V
52	L0709301-220	CNTRL BD EXT/STOP LVH7, LP/LVH8	115V
52	L0709302-220	CNTRL BD EXT/STOP LVH7, LP/LVH8	230V
52	L0700901-150	CNTRL BD, 4-20 MA/STOP; F, G	115V
52	L0700902-150	CNTRL BD, 4-20 MA/STOP; F, G	230V
52	L0700901-200	CNTRL BD, 4-20 MA/STOP; H	115V
52	L0700902-200	CNTRL BD, 4-20MA/STOP; H	230V
52	L0709201-220	CNTRL BD, 4-20MA/STP, LVH7, LP/LVH8	115V
52	L0709202-220	CNTRL BD, 4-20MA/STP, LVH7, LP/LVH8	230V
52	L0701900-150	CNTRL BD, E - DC	
52	L9906500-000	CNTRL BD, 0, 5 SIZE SING FUNC	115V
52	L9906600-000	CNTRL BD, 0, 5 SIZE SING FUNC	230V
52	L9906201-000	CNTRL BD, C+, A+	115V
52	L9906202-000	CNTRL BD, C+, A+	230V
52	L0702701-125	CNTRL BD, LM A, B, C, D, E/K2, 3 SIGNAL RELAY	115V
52	L0702702-125	CNTRL BD, LM A, B, C, D, E/K2, 3 SIGNAL RELAY	230V
52	L0702901-125	CNTRL BD, LM A, B, C, D, E/K2, 3 POWER RELAY	115V
52	L0702902-125	CNTRL BD, LM A, B, C, D, E/K2, 3 POWER RELAY	230V
52	L0703801-150	CNTRL BD, LM F, G, K5 SIGNAL RELAY	115V
52	L0703802-150	CNTRL BD, LM F, G, K5 SIGNAL RELAY	230V
52	L0703701-150	CNTRL BD, LM F, G, K5 POWER RELAY	115V
52	L0703702-150	CNTRL BD, LM F, G, K5 POWER RELAY	230V
52	L0702801-190	CNTRL BD, LM H, K7 Signal Relay	115V
52	L0702802-190	CNTRL BD, LM H, K7 Signal Relay	230V
52	L0703001-190	CNTRL BD, LM H, K7 POWER RELAY	115V 115V
52	L0703002-190	CNTRL BD, LM H, K7 POWER RELAY	230V
52	L0705006-120	CNTRL BD, EXT, C+, A+	230V
52	L0705106-120	CNTRL BD, EXT, SERIES C	230V
52	L0705110-120	CNTRL BD, EXT, C (LC54)	230V
53	L0601200-000	CNTRL PNL, SERIES MP SIGNAL, H & K7	
53	L0601300-000	CNTRL PNL, SERIES MP SIGNAL	
53	L0601400-000	CNTRL PNL, SERIES MP POWER	
53	L0601500-000	CNTRL PNL, SERIES MP POWER, H & K7	
53	L0601600-000	CNTRL PNL (ALL H & K7 PUMPS)	
54	L1600400-000	DUST COVER, CONT PNL	HSG #3
54	L1600500-000	DUST COVER, CONT PNL	HSG #2
55	L2000100-040	SHAFT, ADJ FEMALE .040	HSG #2,3
55	L2000100-080	SHAFT, ADJ FEMALE .080	HSG #2,3
55	L2000200-040	SHAFT, ADJ FEMALE .040	HSG #1

DRIVE END COMPONENTS

Item No.	Part No.	Description
55	L2000200-080	SHAFT, ADJ FEMALE .080 HSG #1
56	L2000300-PBT	SHAFT, ADJ MALE HSG #2,3
56	L2000400-PBT	SHAFT, ADJ MALE HSG #1
59	L1500100-EPB	O-RING, HSG #1/CONT PNL
59	L1500300-NTR	O-RING, HSG #2/CONT PNL
59	L1500500-NTR	O-RING, HSG #3/CONT PNL
61	L9900600-000	CONNECTOR, LIQUID TIGHT
61	L9900700-000	CONNECTOR, STRAIN RELIEF
62	L9700300-000	CORD, POWER, SERIES C, E 125V
62	L9700400-000	CORD, POWER, SERIES C, E 230V
62	L9701200-000	CORD,POWER, SERIES E PLUS 125V
62	L9701300-000	CORD,POWER, SERIES E PLUS 230V
63	L9700700-250	CIRCUIT BREAKER, SERIES MP
63	L9707300-000	FUSE 2 AMP, SERIES E, E PLUS
63	L9706900-000	BOARD MNTD FUSE, SERIES A+, C+, C, E
64	L9800200-188	CNTRL PNL SCREW
65	L1500800-NTR	GROMMET, STROKE LENGTH
66	L1900800-000	KNOB, STROKE RATE/SWITCH
70	L9700500-000	LOCKING TAB
71	L1900100-FPP	KNOB, STROKE LENGTH
71	L1900300-FPP	KNOB, STROKE LENGTH
72	L9800200-188	KNOB MOUNTING SCREW
76	L1500900-NTR	GROMMET STROKE LENGTH
81	L5000801-115	CNTRL PANEL ASSY, A-B-D-E SIZE SLDS 115V
81	L5000801-230	CNTRL PANEL ASSY, A-B-D-E SIZE SLDS 230V
81	L5000901-115	CNTRL PANEL ASSY, EXT/STOP, A-B-D-E SIZE SLDS 115V
81	L5000901-230	CNTRL PANEL ASSY, EXT/STOP, A-B-D-E SIZE SLDS 230V
81	L5001001-115	CNTRL PANEL ASSY, 4-20MA/STOP, A-B-D-E- SIZE SLDS 115V
81	L5001001-230	CNTRL PANEL ASSY, 4-20MA/STOP, A-B-D-E SIZE SLDS 230V
81	L5000301-230	CNTRL PANEL ASSY, F-G SIZE SLDS 230V
81	L5001301-115	CNTRL PANEL ASSY, H SIZE SLD 115V
81	L5001301-230	CNTRL PANEL ASSY, H SIZE SLD 230V
81	L5028500-115	CNTRL PANEL ASSY, LEH8 115V
81	L5028500-230	CNTRL PANEL ASSY, LEH8 230V
81	L5028201-115	CNTRL PANEL ASSY, LVH7, LP/LVH8 115V
81	L5028200-230	CNTRL PANEL ASSY, LVH7, LP/LVH8 230V
81	L5001401-115	CNTRL PANEL ASSY, EXT/STOP, H SIZE SLD 115V
81	L5001401-230	CNTRL PANEL ASSY, EXT/STOP, H SIZE SLD 230V
81	L5028301-115	CNTRL PANEL ASSY, EXT/STOP, LVH7, LP/LVH8 115V
81	L5028300-230	CNTRL PANEL ASSY, EXT/STOP, LVH7, LP/LVH8 230V
81	L5001501-115	CNTRL PANEL ASSY, 4-20MA/STOP, H SIZE SLD, 115V 115V
81	L5001501-230	CNTRL PANEL ASSY, 4-20MA/STOP, H SIZE SLD 230V
81	L5028401-115	CNTRL PANEL ASSY, 4-20MA/STOP, LVH7, LP/LVH8 115V 115V
81	L5028401-230	CNTRL PANEL ASSY, 4-20MA/STOP, LVH7, LP/LVH8 230V
81	L5000100-012	CNTRL PANEL ASSY, E-DC SIZE 01, 13, 14
81	L5000200-012	CNTRL PANEL ASSY, E-DC SIZE 44
81	L5000100-115	CNTRL PANEL ASSY, SERIES E 0-1/SIZE SLD 115V
81	L5000100-230	CNTRL PANEL ASSY, SERIES E 0-1/SIZE SLD 230V
81	L5000200-115	CNTRL PANEL ASSY, 3-4 SIZE SLDS 115V
81	L5000200-230	CNTRL PANEL ASSY, 3-4 ZISE SLDS 230V
81	L5002900-115	CNTRL PANEL ASSY SIN-FUNC 0-SIZE SLD, 115V SERIES C
81	L5002900-230	CNTRL PANEL ASSY SIN-FUNC 0-SIZE SLD, 230V SERIES C
81	L5003000-115	CNTRL PANEL ASSY SIN-FUNC 5-SIZE SLD, 115V SERIES C
81	L5003000-230	CNTRL PANEL ASSY SIN-FUNC 5-SIZE SLD, 230V SERIES C
81	L5011000-115	CNTRL PANEL ASSY EXT PACE SIZE 54, SERIES C 115V
81	L5013000-115	CNTRL PANEL ASSY EXT PACE SIZE 54, SERIES C 115V
81	L5003014-115	CNTRL PANEL ASSY, EXT/STOP K5 115V
81	L5003015-115	CNTRL PANEL ASSY, 4-20MA/STOP K2 115V

DRIVE END COMPONENTS

Item No.	Part No.	Description
81	L5003016-115	CNTRL PANEL ASSY, 4-20MA/STOP LPK5 115V
81	L5003701-115	CNTRL PANEL ASSY, STD K SIZE SLD 115V
81	L5003701-230	CNTRL PANEL ASSY, STD K SIZE SLD 230V
81	L5003801-115	CNTRL PANEL ASSY, EXT/STOP K SIZE SLD 115V
81	L5003801-230	CNTRL PANEL ASSY, EXT/STOP K SIZE SLD 230V
81	L5003903-115	CNTRL PANEL ASSY, 4-20MA/STOP K7 115V
81	L5003903-230	CNTRL PANEL ASSY, 4-20MA/STOP K7 230V
81	L5004100-115	CNTRL PANEL ASSY, SIN-FUNC SIZE 54, 115V SERIES C PLUS
81	L5004100-230	CNTRL PANEL ASSY, SIN-FUNC SIZE 54, 230V SERIES C PLUS
81	L5010800-230	CNTRL PANEL ASSY EXT PACE SIZE 02, 03, 04, C3, C4 SERIES A+/C+ 230V
81	L5010900-230	CNTRL PANEL ASSY EXT PACE SIZE 54, 64 SERIES A+/C+ 230V
81	L5005200-115	CNTRL PANEL ASSY, SIZE 02, 03, 04, C3, C4 SERIES A+/C+ 115V
81	L5005300-230	CNTRL PANEL ASSY, SIZE 02, 03, 04, C3, C4 SERIES A+/C+ 230V
81	L5004800-115	CNTRL PANEL ASSY, SIZE 54, 64 SERIES A+/C+ 115V
81	L5004900-230	CNTRL PANEL ASSY, SIZE 54, 64 SERIES A+/C+ 230V
81	L5007501-115	CNTRL PNL ASSY LMK2 SIGNAL RELAY 115V
81	L5007301-115	CNTRL PNL ASSY LM A,B,C,D,E,K3 SIGNAL RELAY 115V
81	L5007501-230	CNTRL PNL ASSY LMK2 SIGNAL RELAY 230V
81	L5007301-230	CNTRL PNL ASSY LM A,B,C,D,E,K3 SIGNAL RELAY 230V
81	L5007601-115	CNTRL PNL ASSY LMK2 POWER RELAY 115V
81	L5007401-115	CNTRL PNL ASSY LM A,B,C,D,E,K3 POWER RELAY 115V
81	L5007601-230	CNTRL PNL ASSY LMK2 POWER RELAY 230V
81	L5007401-230	CNTRL PNL ASSY LM A,B,C,D,E,K3 POWER RELAY 230V
81	L5007701-115	CNTRL PNL ASSY LMK5 SIGNAL RELAY 115V
81	L5007101-115	CNTRL PNL ASSY LM F, G SIGNAL RELAY 115V
81	L5007701-230	CNTRL PNL ASSY LMK5 SIGNAL RELAY 230V
81	L5007101-230	CNTRL PNL ASSY LM F, G SIGNAL RELAY 230V
81	L5007801-115	CNTRL PNL ASSY LMK5 POWER RELAY 115V
81	L5007201-115	CNTRL PNL ASSY LM F, G POWER RELAY 115V
81	L5007801-230	CNTRL PNL ASSY LMK5 POWER RELAY 230V
81	L5007201-230	CNTRL PNL ASSY LM F, G POWER RELAY 230V
81	L5007901-115	CNTRL PNL ASSY LMK7 SIGNAL RELAY 115V
81	L5006901-115	CNTRL PNL ASSY LM H SIGNAL RELAY 115V
81	L5007901-230	CNTRL PNL ASSY LMK7 SIGNAL RELAY 230V
81	L5006901-230	CNTRL PNL ASSY LM H SIGNAL RELAY 230V
81	L5008001-115	CNTRL PNL ASSY LMK7 POWER RELAY 115V
81	L5007001-115	CNTRL PNL ASSY H POWER RELAY 115V
81	L5008001-230	CNTRL PNL ASSY LMK7 POWER RELAY 230V
81	L5007001-230	CNTRL PNL ASSY H POWER RELAY 230V
88	L9804000-000	GROUND LUG NUT
89	L9800500-STL	GROUND LUG BOLT
92	L9700800-000	BREAKER COVER
	L9700200-000	CORD, SIGNAL, 10 FT
	L9700201-000	CORD, SIGNAL, 20 FT
	L9700800-000	PROTECTIVE BOOT, CKT BRKER

BLEED VALVE ASSEMBLIES

Item No.	Part No.	Description	OD
11	L3300H01-FPP	FPP/CSPE	3/8"
11	L3300H01-PVC	PVC/CSPE	3/8"
11	L3300H03-FPP	FPP/CSPE	1/2"
11	L3300H03-PVC	PVC/CSPE	1/2"
11	L3300T01-FPP	FPP/TFE	3/8"
11	L3300T01-PVC	PVC/TFE	3/8"
11	L3300T01-PVD	PVD/TFE	3/8"
11	L3300T03-FPP	FPP/TFE	1/2"
11	L3300T03-PVC	PVC/TFE	1/2"
11	L3300T03-PVD	PVD/TFE	1/2"
11	L3300V01-FPP	FPP/VTN	3/8"
11	L3300V01-PVC	PVC/VTN	3/8"
11	L3300V01-PVD	PVD/VTN	3/8"
11	L3300V03-FPP	FPP/VTN	1/2"
11	L3300V03-PVC	PVC/VTN	1/2"
11	L3300V03-PVD	PVD/VTN	1/2"

FOOT VALVE / STRAINER ASSEMBLIES

Item No.	Part No.	Description	ID X OD
12	J40117	FPP/CSPE/C	3/8" X 1/2"
12	J40203	FPP/CSPE/316	3/8" X 1/2"
12	J40123	FPP/CSPE/TFE	3/8" X 1/2"
12	J60509	FPP/VTN/C	3/8" X 1/2"
12	J40141	FPP/VTN/316	3/8" X 1/2"
12	J40125	FPP/VTN/TFE	3/8" X 1/2"
12	J40212	FPP/FTF/C	3/8" X 1/2"
12	J40175	FPP/FTF/316	3/8" X 1/2"
12	J40171	FPP/FTF/TFE	3/8" X 1/2"
12	J60728	PVD/FTF/C	3/8" X 1/2"
12	J60729	PVD/CSPE/C	3/8" X 1/2"
12	J60730	PVD/VTN/C	3/8" X 1/2"
12	J40116	FPP/CSPE/C	1/4" X 3/8"
12	J40156	FPP/CSPE/316	1/4" X 3/8"
12	J40122	FPP/CSPE/TFE	1/4" X 3/8"
12	J60524	FPP/VTN/C	1/4" X 3/8"
12	J40158	FPP/VTN/316	1/4" X 3/8"
12	J40124	FPP/VTN/TFE	1/4" X 3/8"
12	J40211	FPP/FTF/C	1/4" X 3/8"
12	J40170	FPP/FTF/316	1/4" X 3/8"
12	J40169	FPP/FTF/TFE	1/4" X 3/8"
12	J60716	PVD/FTF/C	1/4" X 3/8"
12	J60717	PVD/CSPE/C	1/4" X 3/8"
12	J60718	PVD/VTN/C	1/4" X 3/8"
12	J40095	316	.25 NPT
12	J40195	FPP/CSPE/C	.25 NPT
12	J40187	FPP/VTN/C	.25 NPT
12	J40179	FPP/FTF/C	.25 NPT
12	J60503	FPP	.50 NPT
12	J60561	FPP	1/2 X 3/4"
12	J60564	FPP/FTF/C	3/16 X 5/16"
12	J60712	PVD/FTF/C	3/16 X 5/16"

STAINLESS STEEL VALVE REPAIR KITS

Part No.	Description
L9904200-316	VALVE REPAIR KIT - ATS2
L9904600-316	VALVE REPAIR KIT - ATS4
L9904700-316	VALVE REPAIR KIT - ATS6
L9904800-316	VALVE REPAIR KIT - ATS8
L9904900-316	VALVE REPAIR KIT - ATSG

TUBING

Part No.	Description	
00007	SUCT, 3/8 OD, CLEAR PVC	FT
00008	DISCH, 1/2 OD, WHITE PE	FT
00009	DISCH, 1/2 OD, BLACK PE	FT
00010	DISCH, 3/8 OD, WHITE PE	FT
00011	DISCH, 3/8 OD, BLACK PE	FT
J00012	DISCH, 1/2 OD, HI PRES, WHITE	FT
00013	DISCH, 1/2 OD, HI PRES, BLACK	FT
J00022	DISCH, 3/8 OD, HI PRES, WHITE	FT
J00023	SUCT, 1/2 OD, CLEAR PVC	FT
J00024	DISCH, 3/8 OD, HI PRES, BLACK	FT
J00032	SUCT/DISCH, 3/4 OD, CLEAR PV	FT
L9902900-000	PVDF TUBING, 3/8 OD	FT
L9903000-000	PVDF TUBING, 1/2 OD	FT
L9904300-PEB	SUCT, 5/16 OD, PE BLACK	FT
L9904300-PEW	SUCT, 5/16 OD, PE WHITE	FT
L9904300-PVC	SUCT, 5/16 OD, CLEAR PVC	FT
L9904300-PVD	SUCT, 5/16 OD, PVDF WHITE	FT
L9904500-PEW	DISCH, 1/2 X 5/8, PE WHITE	FT
L9913200-BRD	PVC CLEAR BRAIDED, 3/4 OD	FT

INJECTION BACK PRESS VALVE ASSEMBLIES

Item No.	Part No.	Description	ID X OD
13	J41767	FPP/CSPE/C	3/8" X 1/2"
13	J41863	FPP/CSPE/316	3/8" X 1/2"
13	J41773	FPP/CSPE/TFE	3/8" X 1/2"
13	41716	FPP/VTN/C	3/8" X 1/2"
13	J41882	FPP/VTN/316	3/8" X 1/2"
13	J41775	FPP/VTN/TFE	3/8" X 1/2"
13	J41872	FPP/FTF/C	3/8" X 1/2"
13	J41879	FPP/FTF/316	3/8" X 1/2"
13	J41875	FPP/FTF/TFE	3/8" X 1/2"
13	J41694	PVC/CSPE/C	3/8" X 1/2"
13	41698	PVC/CSPE/C 6"	3/8" X 1/2"
13	41702	PP/VTN/C 6"	3/8" X 1/2"
13	J41865	PVC/CSPE/316	3/8" X 1/2"
13	J41759	PVC/CSPE/TFE	3/8" X 1/2"
13	J41714	PVC/VTN/C	3/8" X 1/2"
13	J41095	PVC/VTN/316	3/8" X 1/2"
13	J41761	PVC/VTN/TFE	3/8" X 1/2"
13	J41873	PVC/FTF/C	3/8" X 1/2"
13	J41881	PVC/FTF/316	3/8" X 1/2"
13	J41877	PVC/FTF/TFE	3/8" X 1/2"
13	J61073	PVD/FTF/TFE	3/8" X 1/2"
13	J61021	PVD/FTF/C	3/8" X 1/2"
13	J41766	FPP/CSPE/C	1/4" X 3/8"
13	J41862	FPP/CSPE/316	1/4" X 3/8"
13	J41772	FPP/CSPE/TFE	1/4" X 3/8"
13	41715	FPP/VTN/C	1/4" X 3/8"
13	41701	FPP/VTN/C 6"	1/4" X 3/8"
13	J41866	FPP/VTN/316	1/4" X 3/8"
13	J41774	FPP/VTN/TFE	1/4" X 3/8"
13	J61098	FPP/FTF/C	1/4" X 3/8"
13	J41878	FPP/FTF/316	1/4" X 3/8"
13	J41874	FPP/FTF/TFE	1/4" X 3/8"
13	41693	PVC/CSPE/C	1/4" X 3/8"
13	41705	PVC/CSPE/C 6"	1/4" X 3/8"
13	J41864	PVC/CSPE/316	1/4" X 3/8"
13	J41758	PVC/CSPE/TFE	1/4" X 3/8"
13	J61237	PVC/VTN/C	1/4" X 3/8"
13	J41867	PVC/VTN/316	1/4" X 3/8"
13	41760	PVC/VTN/TFE	1/4" X 3/8"
13	J41996	PVC/FTF/C	1/4" X 3/8"
13	J41880	PVC/FTF/316	1/4" X 3/8"
13	J41876	PVC/FTF/TFE	1/4" X 3/8"
13	J61020	PVD/FTF/C	1/4" X 3/8"
13	J61026	PVD/FTF/TFE	1/4" X 3/8"
13	J41911	FPP/CSPE/C	.25 NPT
13	J41901	FPP/VTN/C	.25 NPT
13	J41944	FPP/FTF/C	.25 NPT
13	J41904	PVC/CSPE/C	.25 NPT
13	J41858	PVC/VTN/C	.25 NPT
13	J41908	PVC/FTF/C	.25 NPT
13	J61015	PVD/FTF/C	.25 NPT
13	J61025	316/FTF/316	.25 NPT
13	J41969	PVC/CSPE/C	1/2 X 3/4"
13	J61149-10P	FPP/FTF/C	1/2 X 3/4"
13	J61152-10P	FPP/CSPE/C	1/2 X 3/4"
13	J61160-10P	FPP/FTF/C	.50 NPT
13	J61157-10P	PVC/FTF/C	.50 NPT
13	J61156-10P	PVC/TFE/S	.50 NPT

OTHER

Part No.	Description
26858	BULKHEAD FITTING - PP 1/2"
26859	BULKHEAD FITTING - PVC 1/2"
26860	BULKHEAD FITTING - PVC 3/8"
26867	BULKHEAD FITTING - PP 3/8"
L9905000-FPP	J CONVERSION KIT (FPP/TFE/C)
L9905000-PVC	J CONVERSION KIT (PVC/TFE/C)
L9905100-FPP	J CONVERSION KIT (FPP/TFE/C)
L9905100-PVC	J CONVERSION KIT (PVC/TFE/C)
L9905100-PVD	J CONVERSION KIT (PVD/TFE/C)
L9906901-000	CONV. KIT (.75" VVC9) DEGAS HEAD
L9907001-000	CONV. KIT (1.00" VVC9) DEGAS HEAD
L9907101-000	CONV. KIT (1.25" VVC9) DEGAS HEAD

OMNI Mechanical Diaphragm Pumps

OMNI mechanical metering pumps and controllers are the economical standard for a reliable chemical feed pump with virtually no maintenance. For high technology in a simple to understand package an an economical price, add an MPC (metering pump controller) to the OMNI pump to take advantage of complete system integration between metering pump and process. The OMNI offers the following user friendly benefits

- ***Long Life -*** *DC2—DC6 are greased for life, DC7 is oil lubricated.*
- ***Compact and Lightweight -*** Saves space and easy handling.
- ***Controller Ready -*** Add an MPC when automatic pump control is required.
- ***Simple Design -*** Easy to install and operate.
- ***Highly Efficient -*** Quiet and cool, standard fan cooled motor design.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Premium Standard Wetted Component Materials.***
- ***Few Moving Parts*** and ***Wall Mountable.***
- ***Liquid End Materials–*** PP, PVDF & 316 SS

MPC NO MOTOR OPTION	
Minimal MPC Motor Requirements:	
HP/KW	Defined on order (Pump Dependent)
Voltage	230V nominal
Base Freq	50 or 60Hz (by Mfgr's Motor design)
Type	TEFC
Phases	3 phase
Poles	4 poles, 1500 rpm (50 hz) or 1,800 rpm (60hz) synchronous speed
SF	>=1.05
Turn Down	Minimum 3:1 constant torque
Insulation	Class F or better
Inverter Duty	Not Required

Performance & Selection Table

MODEL		DC2A	DC2B	DC2C	DC3B	DC3C	DC4B	DC4C	DC4D	DC5C	DC5D	DC6C	DC6D
Capacity	GPH	7	13.9	24	32.3	55.5	40.6	61.8	78.9[1]	105	138	218.7	272.6[1]
60 hz & MPC	LPH	26.4	52.8	90.8	122	210	154	234	298.8[1]	396	522[1]	828	1032[1]
Capacity	GPH	5.8	11.6	20	26.9	46.2	33.8	51.5	65.8	87.2	115	182.3	227.2
50 hz	LPH	22	44	75.7	102	175	128	195	249	330	435	690	860
Pressure	PSIG	150			75		150			90		45	
(max.)	BAR	10.3			5.1		10.3			6.2		3.1	
SPM @	1725	44	88	150	88	150	117	175	223 [1]	175	223 [1]	175	223 [1]
	1425	37	73	125	73	125	97	145	186	146	186	146	186
HP/kW Required		0.25 / 0.18					0.50 / 0.37						
Connection Size		1/4" (F)NPT			1/2" (F)NPT OR (F)BSPT					1" (F)NPT OR (F)BSPT			

[1]This selection uses a high stroking rate, use with caution.
Must have at least 25 psig discharge pressure and water-like viscosity.

OMNI DC2 thru DC6 Selection Guide

DC_ _ _ _ _ - _ _ _ _

MODELS:	**2A**	= PVDF - 7.0 GPH (26.4 LPH)@60Hz & MPC or 5.8 GPH (22.0 LPH)@50Hz
	2A	= 316SS - 7.0 GPH (26.4 LPH)@60Hz & MPC or 5.8 GPH (22.0 LPH)@50Hz
	2B	= PVDF - 13.9 GPH (52.8 LPH)@60Hz & MPC or 11.6 GPH (44.0 LPH)@50Hz
	2B	= 316SS - 13.9 GPH (52.8 LPH)@60Hz & MPC or 11.6 GPH (44.0 LPH)@50Hz
	2C	= PVDF - 24.0 GPH (90.8 LPH)@60Hz & MPC or 20 GPH (75.7 LPH)@50Hz
	2C	= 316SS - 24.0 GPH (90.8 LPH)@60Hz & MPC or 20 GPH (75.7 LPH)@50Hz
	3B	= PVDF - 32.3 GPH (122.4 LPH)@60Hz & MPC or 26.9 GPH (102.0 LPH)@50Hz
	3B	= 316SS - 32.3 GPH (122.4 LPH)@60Hz & MPC or 26.9 GPH (102.0 LPH)@50Hz
	3C	= PVDF - 55.5 GPH (210 LPH)@60Hz & MPC or 46.2 GPH (175.0 LPH)@50Hz
	3C	= 316SS - 55.5 GPH (210 LPH)@60Hz & MPC or 46.2 GPH (175.0 LPH)@50Hz
	4B	= PVDF - 40.6 GPH (153.6 LPH)@60Hz & MPC or 33.8 GPH (128.0 LPH)@50Hz
	4B	= 316SS - 40.6 GPH (153.6 LPH)@60Hz & MPC or 33.8 GPH (128.0 LPH)@50Hz
	4C	= PVDF - 61.8 GPH (234 LPH)@60Hz & MPC or 51.5 GPH (195.0 LPH)@50Hz
	4C	= 316SS - 61.8 GPH (234 LPH)@60Hz & MPC or 51.5 GPH (195.0 LPH)@50Hz
	4D	= PVDF - 78.9[1] GPH (298.8[1] LPH)@60Hz & MPC or 65.8 GPH (249.0 LPH)@50Hz
	4D	= 316SS - 78.9[1] GPH (298.8[1] LPH)@60Hz & MPC or 65.8 GPH (249.0 LPH)@50Hz
	5C	= PP - 104.6 GPH (396 LPH)@60Hz & MPC or 87.2 GPH (330.0 LPH)@50Hz
	5C	= PVDF - 104.6 GPH (396 LPH)@60Hz & MPC or 87.2 GPH (330.0 LPH)@50Hz
	5C	= 316SS - 104.6 GPH (396 LPH)@60Hz & MPC or 87.2 GPH (330.0 LPH)@50Hz
	5D	= PP - 137.9[1] GPH (522[1] LPH)@60Hz & MPC or 114.9 GPH (435.0 LPH)@50Hz
	5D	= PVDF - 137.9[1] GPH (522[1] LPH)@60Hz & MPC or 114.9 GPH (435.0 LPH)@50Hz
	5D	= 316SS - 137.9[1] GPH (522[1] LPH)@60Hz & MPC or 114.9 GPH (435.0 LPH)@50Hz
	6C	= PP - 218.7 GPH (828 LPH)@60Hz & MPC or 182.3 GPH (690.0 LPH)@50Hz
	6C	= PVDF[2] - 218.7 GPH (828 LPH)@60Hz & MPC or 182.3 GPH (690.0 LPH)@50Hz
	6C	= 316SS - 218.7 GPH (828 LPH)@60Hz & MPC or 182.3 GPH (690.0 LPH)@50Hz
	6D	= PP - 272.6[1] GPH (1032[1] LPH)@60Hz & MPC or 227.2 GPH (860.0 LPH)@50Hz
	6D	= PVDF[2] - 272.6[1] GPH (1032[1] LPH)@60Hz & MPC or 227.2 GPH (860.0 LPH)@50Hz
	6D	= 316SS - 272.6[1] GPH (1032[1] LPH)@60Hz & MPC or 227.2 GPH (860.0 LPH)@50Hz

[1]Caution: This pump has a high stroke rate & needs at least 25 psig back pressure and water-like viscosity.

[2]These pumps are subject to export restrictions

MOTOR:	**1**	= IEC 71 B14 Frame, 1PH 115/230V, 0.37kW (1/2HP), TEFC, Motor [50/60hz]*
	2	= 56C Frame, 1PH 115/230V, 0.37kW (1/2HP), TEFC, MOTOR (60hz)
	3	= IEC 71 B14 Frame, 3PH 220/380V (&460V), 0.37kW (1/2HP), TEFC, Motor [50/60hz]*
	4	= 56C Frame, 3PH 220/380V (&460V), 0.37kW (1/2HP), TEFC, MOTOR (60hz)
	5	= MPC with 56C frame motor - price included in MPC price
	6	= MPC NO MOTOR with 56C frame [Always @ 60 hz!] (price subtracted from MPC)
	7	= MPC with 71 frame motor - price included in MPC price
	8	= MPC NO MOTOR with 71 frame [Always @ 60 hz!] (price subtracted from MPC)
	X	= NO MOTOR - 56C frame
	Y	= NO MOTOR - IEC 71 B14 frame

*** In the Americas, lead time is 8 weeks for any pump with these motors.**

WET END MATERIALS:	**P**	= PP Liqud End - PTFE Diaphragm and PTFE O-rings - Ceramic Ball Valves *
	F	= PVDF Liqud End - PTFE Diaphragm and PTFE O-rings - Ceramic Ball Valve
	A	= 316SS Liquid End - PTFE Diaphragm and PTFE O-rings - 316SS Ball Valves

*** Model DC5 have PVC reagent heads with PP valves.**

CONNECTION TYPE	**P**	= NPT
	B	= Din ISO 228/1 (BSPT) (Not available on DC2 pumps)

Optional MPC Controller

CONTROL:	BLANK	= No MPC Controller
	M	= MPC Controller

CONTROLLER INPUT VOLTAGE	BLANK	= NO MPC CONTROLLER
	1	= 110-115V 50/60Hz ETL (UL & CSA) - Single Phase Only
	2	= 220-230V 50/60Hz CE & ETL (UL & CSA) - Single Phase Only

Contact factory for additional motor options. MPC output is 60Hz even if the input voltage is 50Hz - Select pump based on 60Hz performance.

EXTENDED REMOTE CABLE:	BLANK	= NO MPC CONTROLLER
	X	= PUMP MOUNTED KEYPAD with standard 1.5m (4.5 feet) of cable
	C	= EXTENDED REMOTE CABLE, KEYPAD MOUNTED OFF THE PUMP *

NOTE: * The MPC remote can be located up to 1000 feet (305m) away from the pump. Order extra cable by adding the line item part number NP530147-000 per foot to the order. Will be shipped loose as a line item for field installation. Example: If 62 ft of cable is needed, order 62 pieces of NP530147-000. MPC - PANEL MOUNT: The MPC remote is already a NEMA 4X (IP56) rated enclsoure. Instead of integrating this into a control panel, we suggest mounting the remote ""as is"" on the outside of a panel or next to a panel on the wall. The bracket for wall or panel mounting is the same bracket that comes as standard on the pump. There is no chassis mount available.

LANGUAGE (MPC will be shipped in language chosen)	BLANK	= NO MPC CONTROLLER
	E	= English
	F	= French
	S	= Spanish
	G	= German

OMNI Mechanical Diaphragm Pumps

OMNI DC7 Series Selection Guide

DC7_ _ _ _

MODELS	**7C** = PP - 412 GPH (1560 LPH)@60Hz & MPC or 343.4 GPH (1300 LPH)@50Hz
	7C = PVDF[2] - 412 GPH (1560 LPH)@60Hz & MPC or 343.4 GPH (1300 LPH)@50Hz
	7D = PP - 507[1] GPH (1920[1] LPH)@60Hz & MPC or 423 GPH (1600 LPH)@50Hz
	7D = PVDF[2] - 507[1] GPH (1920[1] LPH)@60Hz & MPC or 423 GPH (1600 LPH)@50Hz
	Duplex Models
	7J = PP - 824 GPH (3120 LPH)@60Hz & MPC or 687 GPH (2600 LPH)@50Hz
	7J = PVDF[2] - 824 GPH (3120 LPH)@60Hz & MPC or 687 GPH (2600 LPH)@50Hz
	7K = PP - 1014[1] GPH (3840[1] LPH)@60Hz & MPC or 845 GPH (3200 LPH)@50Hz
	7K = PVDF[2] - 1014[1] GPH (3840[1] LPH)@60Hz & MPC or 845 GPH (3200 LPH)@50Hz

[1]Caution: This pump has a high stroke rate & needs at least 25 psig back pressure and water-like viscosity.

[2]These pumps are subject to export restrictions.

MOTORS	**1** = 90 IEC FRAME
	2 = 100 IEC FRAME
	3 = 56C FRAME
	4 = 145TC FRAME
WET END MATERIALS:	**P** = PP Liqud End - PTFE Diaphragm and PTFE O-rings - Ceramic Ball Valves
	F = PVDF Liqud End - PTFE Diaphragm and PTFE O-rings - Ceramic Ball Valve
	X = No Motor Purchased (Pump will come with Main Assy and Motor Frame Kit
	M = Motor Purchased (as line Item) (Pump will come completely assembled)

OMNI DC7 Series Selection Guide

EP C B _

MODELS	**EP** = MPC VECTOR
ENCLOSURE	**C** = NEMA 4X (IP56)
RATINGS	**B** = 2 HP (1.5kW) 208-240 VAC, 1 Phase, 50/60 Hz
LANGUAGE	**X** = English
	A = German
	B = French
	C = Spanish

A completed model number should look like "EPCBX"

Motor Selection

Part Number	Power (hp / kW)	Volts	Phase	Hz	RPM	Frame	Enclosur
MD496	1.5 / 1.1	208-230 / 460	3	60	1725	NEMA 56C	TEFC
W773127-001 **	2 / 1.5 (DC7 Duplex)			60		NEMA 145TC	
NP500622-000	1.5 / 1.1			60	1140	NEMA 56C	
NP500619-000	1.5 / 1.1	220 / 380	3	50/60	1425 / 1725	IEC 90	TEFC
NP500624-000 **	2 / 1.5 (DC7 Duplex)						
NP500621-000	1.5 / 1.1				940 / 1140		

Performance & Selection Table

MODEL		DC7C	DC7D	DC7J	DC7K
Capacity	GPH	412	507[1]	824	1014[1]
60 hz & MPC	LPH	1560	1920[1]	3120	3840[1]
Capacity	GPH	343	423	687	845
50 hz	LPH	1300	1600	2600	3200
Pressure	PSIG	60			
(max.)	BAR	4.1			
SPM @	1725	175	223 [1]	175	223 [1]
	1425	146	186	146	186
HP/kW Required		1.5 / 1.1		2 / 1.5	
Connection Size		1 1/2" (F)NPT, ANSI 1 1/2" & DIN 40 FLANGE			

[1]This selection uses a high stroking rate, use with caution.
Must have at least 25 psig discharge pressure and water-like viscosity.

OMNI Mechanical Diaphragm Pumps

Common Pump Accessories - Omni & Others

Component	Size	Material	Part No.
Drip Cover, Motor	56C	Steel, Baldor	NP999119
Pressure Relief Valves	1/2"	PVC/TFE	NA100001-PVC
	1/2"	PVDF/TFE	NA100001-PVD
	1/2"	SS/TFE	NA100001-316
	1"	PVC/TFE	NA100002-PVC
	1"	PVDF/TFE	NA100002-PVD
	1"	SS/TFE	NA100002-316
	1.5"	PVC/TFE	NA100003-PVC
	1.5"	PVDF/TFE	NA100003-PVD
Back Pressure Valves	1/2"	PVC/TFE	NA200001-PVC
	1/2"	PVDF/TFE	NA200001-PVD
	1/2"	SS/TFE	NA200001-316
	1"	PVC/TFE	NA200002-PVC
	1"	PVDF/TFE	NA200002-PVD
	1"	SS/TFE	NA200002-316
	1.5"	PVC/TFE	NA200003-PVC
	1.5"	PVDF/TFE	NA200003-PVD
Gauge Isolator w/ 200PSI Gauge	1/4"	CPVC/TFE	NA500001-CPVC
	1/4"	PVDF/TFE	NA500001-PVD
	1/4"	316SS/TFE	NA500001-316
Calibration Column	1/2"	PVC 100mL	NA300001-PVC
	1/2"	PVC 200mL	NA300002-PVC
	3/4"	PVC 500mL	NA300003-PVC
	3/4"	PVC 1000mL	NA300004-PVC
	1"	PVC 2000mL	NA300005-PVC
	1"	PVC 4000mL	NA300006-PVC
	2"	PVC 10,000mL	NA300007-PVC
	2"	PVC 20,000mL	NA300008-PVC
	1/2"	Glass/PVD 100mL	NA300009-PVD
	1/2"	Glass/PVD 200mL	NA300010-PVD
	3/4"	Glass/PVD 500mL	NA300011-PVD
	3/4"	Glass/PVD 1000mL	NA300012-PVD
	1"	Glass/PVD 2000mL	NA300013-PVD
	1"	Glass/PVD 4000mL	NA300014-PVD
	1/2"	Glass/SS 100mL	NA300015-316
	1/2"	Glass/SS 200mL	NA300016-316
	3/4"	Glass/SS 500mL	NA300017-316
	3/4"	Glass/SS 1000mL	NA300018-316
	1"	Glass/SS 2000mL	NA300019-316
	1"	Glass/SS 4000mL	NA300020-316
Y Strainer	1/2"	PVC	40085
	1/2"	CPVC	NA400001-CPVC
	1/2"	PVD	NA400001-PVD
	1"	PVC	NA400002-PVC
	1"	CPVC	NA400002-CPVC
	1"	PVD	NA400002-PVD

OMNI KOPkit Selection Guide

Type Connectio	Wetted Material	Pump	KOPkit Number	List Adder
NPT	PVDF	DC2	NLK020FP	$ 300.80
NPT	PVDF	DC3 or DC4	NLK040FP	$ 451.20
BSPT	PVDF	DC3 or DC4	NLK040FB	$ 451.20
NPT	PVDF	DC5	NLK050FP	$ 630.40
BSPT	PVDF	DC5	NLK050FB	$ 630.40
NPT	PVDF	DC6	NLK060FP	$ 804.50
BSPT	PVDF	DC6	NLK060FB	$ 804.50
NPT	PP	DC5	NLK050PP	$ 516.10
BSPT	PP	DC5	NLK050PB	$ 516.10
NPT	PP	DC6	NLK060PP	$ 679.80
BSPT	PP	DC6	NLK060PB	$ 679.80
N/A	PVDF & PP	DC7	NLK070XX	$ 578.90
NPT	316SS	DC2	NLK020AP	$ 510.90
NPT	316SS	DC3 or DC4	NLK040AP	$ 750.90
BSPT	316SS	DC3 or DC4	NLK040AB	$ 750.90
NPT	316SS	DC5	NLK050AP	$ 904.40
BSPT	316SS	DC5	NLK050AB	$ 810.70
NPT	316SS	DC6	NLK060AP	$ 891.00
BSPT	316SS	DC6	NLK060AB	$ 891.00

150 PSI Pulsation Dampeners - Chargeable

Volume	Body	Bladder	Connection	Part Number
10 cubic inches	POLY	EPDM	3/8" FNPT	W777614-PPN
		CSPE	3/8" FNPT	W777614-PPH
		TFE	3/8" FNPT	W777614-PPT
		Viton	3/8" FNPT	W777614-PPV
		CSPE	1/2" FNPT	L9908300-HYP
		TFE	1/2" FNPT	L9908300-TFE
		Viton	1/2" FNPT	L9908300-VIT
	PVC	CSPE	1/2" FNPT	L9908400-HYP
		TFE	1/2" FNPT	L9908400-TFE
		Viton	1/2" FNPT	L9908400-VIT
	PVDF	EPDM	3/8" FNPT	W777614-PVN
		CSPE	3/8" FNPT	W777614-PVH
		TFE	3/8" FNPT	W777614-PVT
		Viton	3/8" FNPT	W777614-PVV
	316 SS	EPDM	3/8" FNPT	W777611-16N
		CSPE	3/8" FNPT	W777611-16H
		TFE	3/8" FNPT	W777611-16T
		Viton	3/8" FNPT	W777611-16V
85 cubic inches	POLY	EPDM	3/4" FNPT	W777616-PPN
		CSPE	3/4" FNPT	W777616-PPH
		TFE	3/4" FNPT	W777616-PPT
		Viton	3/4" FNPT	W777616-PPV
	PVDF	EPDM	3/4" FNPT	W777616-PVN
		CSPE	3/4" FNPT	W777616-PVH
		TFE	3/4" FNPT	W777616-PVT
		Viton	3/4" FNPT	W777616-PVV
	316 SS	EPDM	3/4" FNPT	W777613-16N
		CSPE	3/4" FNPT	W777613-16H
		TFE	3/4" FNPT	W777613-16T
		Viton	3/4" FNPT	W777613-16V
370 cubic inches	POLY	EPDM	2" FNPT	W777618-PPN
		CSPE	2" FNPT	W777618-PPH
		TFE	2" FNPT	W777618-PPT
		Viton	2" FNPT	W777618-PPV
	PVDF	EPDM	2" FNPT	W777618-PVN
		CSPE	2" FNPT	W777618-PVH
		TFE	2" FNPT	W777618-PVT
		Viton	2" FNPT	W777618-PVV
	316 SS	EPDM	2" FNPT	W777631-16N
		CSPE	2" FNPT	W777631-16H
		TFE	2" FNPT	W777631-16T
		Viton	2" FNPT	W777631-16V
36 cubic inches	POLY	EPDM	3/4" FNPT	W777615-PPN
		CSPE	3/4" FNPT	W777615-PPH
		TFE	3/4" FNPT	W777615-PPT
		Viton	3/4" FNPT	W777615-PPV
	PVDF	EPDM	3/4" FNPT	W777615-PVN
		CSPE	3/4" FNPT	W777615-PVH
		TFE	3/4" FNPT	W777615-PVT
		Viton	3/4" FNPT	W777615-PVV
	316 SS	EPDM	3/4" FNPT	W777612-16N
		CSPE	3/4" FNPT	W777612-16H
		TFE	3/4" FNPT	W777612-16T
		Viton	3/4" FNPT	W777612-16V
175 cubic inches	POLY	EPDM	2" FNPT	W777617-PPN
		CSPE	2" FNPT	W777617-PPH
		TFE	2" FNPT	W777617-PPT
		Viton	2" FNPT	W777617-PPV
	PVDF	EPDM	2" FNPT	W777617-PVN
		CSPE	2" FNPT	W777617-PVH
		TFE	2" FNPT	W777617-PVT
		Viton	2" FNPT	W777617-PVV
	316 SS	EPDM	2" FNPT	W777630-16N
		CSPE	2" FNPT	W777630-16H
		TFE	2" FNPT	W777630-16T
		Viton	2" FNPT	W777630-16V

Specifica 150 PSI Maximum Pressure

CHEM-TECH Peristaltic Pumps

Series XP

The Chem-Tech XP Series with peristaltic technology delivers worry-free dosing in a modern design. Each and every component of the XP Series is designed and manufactured for optimum riability and durability for ***REAL*** Performance.

The electronic timing circuit in the adjustable 'A' Models provides ***reliable*** pump control, without relying on mechanical adjustment components that wear out over time.
The intuitive interface and controls provide ***easy*** operation and the peristaltic design is virtually maintenance-free.

Tailor-made for the water conditioning market, the XP Series offer ***affordable*** solutions in both initial cost and operation. A rugged gear train and computer-aided peristaltic design ensure ***long-lasting*** performance.

Tested and Certified by WQA against NSF/ANSI 61-Section 8. and CSA B483.1

Chem-Tech XP Series Selection Guide

XP_ _ _ _ _ _ _ _

	Pump Size	Flow	Pressure Rating - PSI (Bar) Single Head Options 'H' Tube	'L' Tube	'F' Tube	Duplex 'L' Tube	Tube Size	Speed (RPM)
MODELS:	**XP004**	4 GPD (0.6 LPH)	125 (8.6)	80 (5.5)	60 (4.1)	80 (5.5)	2	30
	XP007	7 GPD (1.1 LPH)						50
	XP009	9 GPD (1.4 LPH)	110 (7.6)	70 (4.8)	50 (3.4)	70 (4.8)	3	30
	XP015	15 GPD (2.4 LPH)						50
	XP014	14 GPD (2.3 LPH)	100 (5.9)	50 (3.4)	40 (2.8)	50 (3.4)	4	30
	XP023	23 GPD (3.6 LPH)						50
	XP030	30 GPD (4.7 LPH)	80 (5.5)	40 (2.8)		40 (2.8)	6	30
	XP050	50 GPD (7.9 LPH)						50
	XP048	48 GPD (7.5 LPH)		25 (1.7)		25 (1.7)	8	30
	XP080	80 GPD (12.6 LPH)						50

ELECTRICAL:	**L**	115V, 60Hz
	H	230V, 50/60Hz
	R	230V, 50Hz with Grounded Right Angle European Plug
	Note: 50Hz pumps will produce 5/6 of the rated flow	

DRIVE:	**F**	Fixed Rate, On / Off Only
	A	Adjustable 20:1 Turndown, On / Off with Current Interrupter Timer
	G	Duplex Head - Fixed Rate, On / Off Only, 'L' Tube
	B	Duplex Head - Adjustable, On / Off with Current Interrupter Timer, 'L' Tube
	1	Pulse Input, .1 to 1 Second Timer
	2	Pulse Input, .2 to 10 Second Timer
	3	Pulse Input, 1 to 60 Second Timer
	4	Dry Contact Input - Fixed Rate Pump
	5	Dry Contact Input - Adjustable Pump
	6	Flow Switch Activated with 3/4" NPT Flow Switch - Fixed Rate Pump
	7	Flow Switch Activated with 3/4" NPT Flow Switch - Adjustable Rate Pump
	8	7 Day - 8 Event Electronic Timer - Fixed Rate Pump

TUBING:	**L**	Low Pressure Norprene with 1/4" Tube Fittings
	H	High Pressure Norprene with 1/4" Tube Fittings
	3	Low Pressure Norprene with 3/8" Tube Fittings
	4	High Pressure Norprene with 3/8" Tube Fittings
	F	Fluran, Acid resistant tubing with 1/4" Tube Fittings (Doesnot include strainer & injector accessories)
	G	Fluran, Acid resistant tubing with 3/8" Tube Fittings (Doesnot include strainer & injector accessories)

SYSTEM:	**X**	Pump Only
	1	15 Gallon Tank System
	3	35 Gallon Tank System
	T	15 Gallon ITS System

A completed model should look like "XP030LFLX"

CHEM-TECH Peristaltic Pumps

Series XPV

The Chem-Tech XPV Series pump combines the best in variable speed peristaltic pump technology with state of the art control electronics, providing you with unparalleled performance, control and value. The XPV represents the leading edge of microprocessor performance management, giving you many choices of input signal types, and onboard timer programs to customize this pump to any application. Of course, this pump is as rugged and reliable as it's fixed speed siblings, the XPF and the XPA.

Key Features

- Variable Speed
- Fully Scalable 4-20mA Input
- Hall Effect Input
- Contacting Head Water Meter
- Flow Totalization
- Cycle Timer
- Daily Timer
- LCD Display

Tested and Certified by WQA against NSF/ANSI 61-Section 8. and CSA B483.1

Chem-Tech Series XPV uses Chem-Tech Large Pump Discount Structure

Chem-Tech XPV Series Selection Guide

XP_ _ _ _ _ _ _ _

	Pump Size	Flow	Pressure Rating - PSI (Bar) Single Head Options 'H' Tube	'L' Tube	'F' Tube	Duplex 'L' Tube	Tube Size	Speed (RPM)
MODELS:	XP008	8 GPD (1.3 LPH)	125 (8.6)	80 (5.5)	60 (4.1)	80 (5.5)	2	65 Max.
	XP017	17 GPD (2.7 LPH)	110 (7.6)	70 (4.8)	50 (3.4)	70 (4.8)	3	
	XP033	33 GPD (5.2 LPH)	100 (5.9)	50 (3.4)	40 (2.8)	50 (3.4) [1]	4	
	XP055	55 GPD (8.7 LPH)	80 (5.5)	40 (2.8)		40 (2.8) [2]	6	60 Max.
	XP100	100 GPD (15.8 LPH)		25 (1.7)		25 (1.7)	8	

ELECTRICAL:	L	115V, 60Hz
	H	230V, 60/50Hz
	R	230V, 60/50Hz with Grounded Right Angle European Plug
DRIVE:	V	Variable Input Control with I/O Cable
	G	Duplex Head - Low Pressure Norprene with 1/4" Tube Fitting
TUBING:	L	Low Pressure Norprene with 1/4" Tube Fittings
	H	High Pressure Norprene with 1/4" Tube Fittings
	3	Low Pressure Norprene with 3/8" Tube Fittings
	4	High Pressure Norprene with 3/8" Tube Fittings
	F	Fluran, Acid resistant tubing with 1/4" Tube Fittings (Doesnot include strainer & injector accessories)
	G	Fluran, Acid resistant tubing with 3/8" Tube Fittings (Doesnot include strainer & injector accessories)
SYSTEM:	X	Pump Only
	1	15 Gallon Tank System
	3	35 Gallon Tank System
	T	15 Gallon ITS System

A completed model should look like "XP033LVLX"

[1] Max flow rate is 15 GPD (2.4 LPH) with Fluran tube.
[2] Max flow rate is 28 GPD (4.4 LPH) with Fluran tube.

XP & XPV SERIES PARTS PRICE SCHEDULE

Part Number	Description
KOPkits - Low Pressure	
NCKA2LPAP1	KOPkit XP - 004 / 007 / 008
NCKA3LPAP1	KOPkit XP - 009 / 015 / 017
NCKA4LPAP1	KOPkit XP - 023 / 033 / 014
NCKA6LPAP1	KOPkit XP - 030 / 050 / 055
NCKA8LPAP1	KOPkit XP - 048 / 080 / 100
KOPkits - High Pressure	
NCKA2HPAP1	KOPkit XP - 004 / 007 / 008
NCKA3HPAP1	KOPkit XP - 009 / 015 / 017
NCKA4HPAP1	KOPkit XP - 023 / 033 / 014
NCKA6HPAP1	KOPkit XP - 030 / 055
NCKA24PAP1	KOPkit XP - 004 / 008 - 3/8"
NCKA44PAP2	KOPkit XP - 033 / 014 - 3/8"
KOPkits - Duplex Low Pressure	
NCKD2LPAP1	KOPkit XP - 004 / 008
NCKD3LPAP1	KOPkit XP - 009 / 017
NCKD4LPAP1	KOPkit XP - 033 / 014
NCKD6LPAP1	KOPkit XP - 030 / 055
NCKD8LPAP1	KOPkit XP - 048 / 100
TUBE KITS	
Low Pressure 1/4" Tube Fittings	
NC90XX2LPA-XXXXX	Kit, Tube Assy - 004 / 007 / 008
NC90XX3LPA-XXXXX	Kit, Tube Assy - 009 / 015 / 017
NC90XX4LPA-XXXXX	Kit, Tube Assy - 023/ 033 / 014
NC90XX6LPA-XXXXX	Kit, Tube Assy - 030 / 050 / 055
NC90XX8LPA-XXXXX	Kit, Tube Assy - 080 / 100
High Pressure 1/4" Tube Fittings	
NC90XX2HPA-XXXXX	Kit, Tube Assy - 004 / 007 / 008
NC90XX3HPA-XXXXX	Kit, Tube Assy - 009 / 015 / 017
NC90XX4HPA-XXXXX	Kit, Tube Assy - 023/ 033 / 014
NC90XX6HPA-XXXXX	Kit, Tube Assy - 030 / 055
Low Pressure 3/8" Tube Fittings	
NC90XX23PA-XXXXX	Kit, Tube Assy - 004 / 007 / 008
NC90XX33PA-XXXXX	Kit, Tube Assy - 009 / 015 / 017
NC90XX43PA-XXXXX	Kit, Tube Assy - 023/ 033 / 014
NC90XX63PA-XXXXX	Kit, Tube Assy - 030 / 050 / 055
NC90XX83PA-XXXXX	Kit, Tube Assy - 080 / 100
High Pressure 3/8" Tube Fittings	
NC90XX24PA-XXXXX	Kit, Tube Assy - 004 / 007 / 008
NC90XX34PA-XXXXX	Kit, Tube Assy - 009 / 015 / 017
NC90XX44PA-XXXXX	Kit, Tube Assy - 023/ 033 / 014
NC90XX64PA-XXXXX	Kit, Tube Assy - 030 / 055
Fluran 1/4" Tubing Fittings	
NC90XX2FPA-XXXXX	Kit, Tube Assy - 004 / 007 / 008
NC90XX3FPA-XXXXX	Kit, Tube Assy - 009 / 015 / 017
NC90XX4FPA-XXXXX	Kit, Tube Assy - 023/ 033 / 014
Fluran 3/8" Tubing Fittings	
NC90XX2GPA-XXXXX	Kit, Tube Assy - 004 / 007 / 008
NC90XX3GPA-XXXXX	Kit, Tube Assy - 009 / 015 / 017
NC90XX4GPA-XXXXX	Kit, Tube Assy - 023/ 033 / 014

Part Number	Description
ACCESSORIES ASSEMBLY	
J63051	Access. Kit, PVC/VTN, .25N
J30257	Grease Kit
PARTS	
J60609	Strainer Assembly w/o Valve
J63002	Control Panel Cover (Clear)
J63004	Rain Hood
J63007	Switch, On-Off
J63013	Timer Assy
J63016	Gear Motor, 30RPM / 120V / 50-60Hz
J63017	Gear Motor, 30RPM / 240V / 50-60Hz
J63018	Gear Motor, 50RPM / 120V / 50-60Hz
J63019	Gear Motor, 50RPM / 240V / 50-60Hz
J63023	Housing Assy, 100% Fixed Rate
J63024	Housing Assy, 100% Timer
L1900500-000	Thumb Screw #6 (Control Pnl Cover)
NC110002-PVC	Coupling Nut, .25 NPT
NC110016-000	Sleeve, .25 OD Tube
NC170004-000	Label, Earth Ground
NC190000-000	Knob, #10 Thumb Screw (Head Mtg)
U8800712	Injection Valve Assembly
NC82XX3LP1-XXXXX	Roller Assembly For Size 2-6 Tubes
NC82XX8LP1-XXXXX	Roller Assembly For Size 8 Tube
TANK / WALL MOUNT KITS	
J63047	15 Gal Tank Bracket
J63048	ITS Tank Adaptor Plate
J63049	Tank / Wall Mount with Shield
WATER METER PULSE TIMER	
U8800655	Control Mate, 115V
U8800715	Control Mate LT, 0.1 to 10 seconds
U0818343	Bracket, Mount

XPV Series Parts

J63006	Drive Motor, Variable Speed
J63053	Digital Control Board, Variable Speed
J63054	Power Supply, Variable Speed
J63071	Motor Control Board, Variable Speed
J63115	Fuse Kit, Variable Speed

CHEM-TECH Mechanical Diaphragm Pumps

Prime Performance

The Chem-Tech Prime Performance Series pumps have a specially designed degassing valve system for applications using off-gasing chemicals like sodium hypochlorite. Built upon motorized-diaphragm technology, the Prime Performance Series delivers dependable performance, extended longevity and consistent metering over long periods of time in a compact form.

A top-mounted, one-way vent valve assembly evacuates gas bubbles from the pump head, providing for reliable operation.

Standard Agency Listings			
Model	ETL	ETLsan	CE
All 60Hz	X	X	
All 50Hz			X
Contact factory for alternate listings			

PRIME PERFORMANCE Selection Guide

X _ _ _ - _ _ - _ _ A _ - _ _ _

MODELS:	**015**	= 15 gpd (2.34 lph) max pres.: 100 PSI (7 BAR)
	024	= 24 gpd (3.78 lph) max pres.: 100 PSI (7 BAR)
	030	= 30 gpd (4.72 lph) max pres.: 100 PSI (7 BAR)
	068	= 68 gpd (10.72 lph) max pres.: 60 PSI (4 BAR)
	100	= 100 gpd (15.76 lph) max pres.: 60 PSI (4 BAR)
ELECTRICAL:	**XA**	= 115V, 60 Hz
	XB	= 230V, 50 Hz
	XC	= 230V, 60 Hz
LIQUID END MATERIALS: Head, Fittings/ Diaph., Seats/ Balls	**BAA**	= PVC / CSPE / Ceramic
	BBA	= PVC / Viton / Ceramic
CONNECTION SIZES:	**6**	= Tubing .38" PE BLK Suction / .38" PE BLK Discharge / .38" PE BLK Return
	8	= Tubing .38" PVC Suction / .38" PE Discharge / .38" PVC Return
	7	= Tubing .50" PE BLK Suction / .50" PE BLK Discharge / .50" PE BLK Return
	9	= Tubing .50" PVC Suction / .50" PE Discharge / .50" PVC Return
SUFFIX CODES:	**XXX**	= Standard
	CZXXX	= CE Approval
	001	= Current Interrupter
	15T	= 15 gal tank w / bulkhead for vent,level w and,safety cap & fasteners
	35T	= 35 gal tank w / bulkhead for vent and fasteners

A complete model should look like "X024-XA-BBA9XXX"

Pumps come with foot valve/strainer/weight, 4' of suction tubing, 4' of return tubing, 8' of discharge tubing, and injecion/back pressure valve assembly.

CHEM-TECH KOPkits

PRIME PERFORMANCE KOPkit Selection Guide

KX100 - _ _ A _

PRODUCT DESIGNATOR:	**KX10(**	= Chem-Tech Kopkit
LIQUID END MATERIALS: Head, Diaph., Seats & Balls	**BAA**	= PVC / CSPE / Ceramic
	BBA	= PVC / Viton / Ceramic
CONNECTION :	**6**	= Tubing .38" Suction / Discharge / Return
	8	= Tubing .38" Suction / Discharge / Return
	7	= Tubing .50" Suction / Discharge / Return
	9	= Tubing .50" Suction / Discharge / Return

CHEM-TECH Mechanical Diaphragm Pumps

Series 100, 150, 200

Series 100 Models - The preferred metering pump for water conditioning professionals around the world. Perfect for applications where economical, consistent performance is required. Capable of a wide range of flows, from less than 3 USgpd up to 30 USgpd and pressures up to 100 psig.

Series 150 Models - Built upon the same solid platform as the 100 Models, these units are capable of higher flowrates. With a range offering up to 100 USgpd, the Series 150 can meet the demands of larger applications. Maximum pressure is 60 psig.

Series 200 Models – The pump popular for their rugged design for continuous duty operation offers feed rates from 10 to 120 gpd and pressures up to 150 psi.

Note: Standard Features do not add to the pump price.

Standard Agency Listings			
Model	ETL	ETLsan	CE
All 60Hz	X	X	
100-150 50Hz			X
200 50Hz			
Contact factory for alternate listings			

Chem-Tech Series 100, 150, 200 Selection Guide

____ - __ - ___ _ ___

MODELS:	**Series 100**	
	X003	= 3 gpd (0.47 lph) max pres.: 100 PSI (7 BAR)
	X007	= 7 gpd (1.00 lph) max pres.: 100 PSI (7 BAR)
	X015	= 15 gpd (2.34 lph) max pres.: 100 PSI (7 BAR)
	X024	= 24 gpd (3.78 lph) max pres.: 100 PSI (7 BAR)
	X030	= 30 gpd (4.72 lph) max pres.: 100 PSI (7 BAR)
	Series 150	
	X068	= 68 gpd (10.72 lph) max pres.: 60 PSI (4 BAR)
	X100	= 100 gpd (15.76 lph) max pres.: 60 PSI (4 BAR)
	Series 200	
	X210	= 10 gpd (1.5 lph) max pres.: 150 PSI (10 BAR)
	X215	= 15 gpd (2.34 lph) max pres.: 150 PSI (10 BAR)
	X220	= 20 gpd (3.15 lph) max pres.: 150 PSI (10 BAR)
	X230	= 30 gpd (4.72 lph) max pres.: 125 PSI (9 BAR)
	X240	= 40 gpd (6.31 lph) max pres.: 125 PSI (9 BAR)
	X260	= 60 gpd (9.46 lph) max pres.: 125 PSI (9 BAR)
	X280	= 80 gpd (12.6 lph) max pres.: 100 PSI (7 BAR)
	2100	= 100 gpd (15.76 lph) max pres.: 100 PSI (7 BAR)
	2120	= 120 gpd (18.91 lph) max pres.: 80 PSI (6 BAR)
ELECTRICAL:	**XA**	= 115V, 60 Hz
	XB	= 230V, 50 Hz (not available in 2120)
	XC	= 230V, 60 Hz
	XD	= 115V, 50/60 Hz, T.E.F.C. (X200's only)
	XL	= 230V, 50/60 Hz, T.E.F.C. (X200's only)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**AAA**	= Clear PVC / CSPE / Ceramic
	AAB	= Clear PVC / CSPE / TFE
	ABA	= Clear PVC / Viton / Ceramic
	ABB	= Clear PVC / Viton / TFE
	ACA	= Clear PVC / TFE/Viton / Ceramic
	AHA	= Clear PVC / TFE/CSPE / Ceramic
	BAA	= PVC / CSPE / Ceramic
	BAB	= PVC / CSPE / TFE
	BBA	= PVC / Viton / Ceramic
	BBB	= PVC / Viton / TFE
	BHA	= PVC / TFE/CSPE / Ceramic
	DAA	= PP / CSPE / Ceramic
	DAB	= PP / CSPE / TFE
	DBA	= PP / Viton / Ceramic
	DBB	= PP / Viton / TFE
	GFA	= Clear PVC / TFE / Ceramic (dbl)
	GFB	= Clear PVC / TFE / TFE (dbl)
	EFC	= 316SS / TFE / 316SS (dbl)
CONNECTION SIZES:	**A**	= Tubing .44" PVC Suction / .50" PE Discharge
	C	= Tubing .38" PVC Suction / .38" PE Discharge
	F	= Tubing .44" PVC Suction / .50" PE BLK Discharge
	S	= Tubing .38" PVC Suction / .38" PE BLK Discharge
	X w/ 316	= .25" FNPT Suction / .25" FNPT Discharge
SUFFIX CODES:	**XXX**	= Standard
	CZXXX	= CE Approval
	001	= Current Interrupter
	500*	= Five Function Valve
	520*	= Five Function Degas Valve
	ITS	= 15 gal ITS Tank System

*** Not available in SS. Adder price is per head.**

A completed model number should look like "X015-XA-BAAAXXX"

CHEM-TECH Mechanical Diaphragm Pumps

Series 100D and 150D

Offering the same features as the Series 100 and 150 Models but configured as duplex units capable of dosing 2 chemicals at different rates.
Note: Standard Features do not add to the pump price.
Remember that liquid end adders must be doubled for duplex pump models.

Standard Agency Listings			
Model	ETL	ETLsan	CE
All 60Hz	X	X	
100-150 50Hz			X
200 50Hz			
Contact factory for alternate listings			

Chem-Tech Series 100D and 150D Duplex Selection Guide

1 _ _ _ - _ _ - _ _ _ _ _ _ _

MODELS:	**Series 100D Duplex Pump**	
	144	= 4.0 gpd (0.63 lph) / 4.0 gpd (0.63 lph) max pres.: 50 PSI (3.5 BAR)
	145	= 5.0 gpd (0.79 lph) / 4.0 gpd (0.63 lph) max pres.: 50 PSI (3.5 BAR)
	155	= 5.0 gpd (0.79 lph) / 5.0 gpd (0.79 lph) max pres.: 50 PSI (3.5 BAR)
	244	= 6.5 gpd (1.03 lph) / 6.5 gpd (1.03 lph) max pres.: 75 PSI (5.25 BAR)
	245	= 7.5 gpd (1.18 lph) / 6.5 gpd (1.03 lph) max pres.: 75 PSI (5.25 BAR)
	255	= 7.5 gpd (1.18 lph) / 7.5 gpd (1.18 lph) max pres.: 75 PSI (5.25 BAR)
	264	= 12.0 gpd (1.89 lph) / 8.0 gpd (1.26 lph) max pres.: 60 PSI (4.2 BAR)
	265	= 12.0 gpd (1.89 lph) / 9.0 gpd (1.43 lph) max pres.: 60 PSI (4.2 BAR)
	344	= 14.0 gpd (2.21 lph) / 14.0 gpd (2.21 lph) max pres.: 75 PSI (5.25 BAR)
	345	= 18.0 gpd (2.84 lph) / 14.0 gpd (2.21 lph) max pres.: 75 PSI (5.25 BAR)
	355	= 18.0 gpd (2.84 lph) / 18.0 gpd (2.84 lph) max pres.: 75 PSI (5.25 BAR)
	364	= 25.0 gpd (3.94 lph) / 15.0 gpd (2.37 lph) max pres.: 60 PSI (4.2 BAR)
	365	= 25.0 gpd (3.94 lph) / 19.0 gpd (3.0 lph) max pres.: 60 PSI (4.2 BAR)
	444	= 30.0 gpd (4.72 lph) / 30.0 gpd (4.72 lph) max pres.: 75 PSI (5.25 BAR)
	445	= 30.0 gpd (4.72 lph) / 33.0 gpd (5.20 lph) max pres.: 75 PSI (5.25 BAR)
	Series 150D	
	455	= 33.0 gpd (5.20 lph) / 33.0 gpd (5.20 lph) max pres.: 75 PSI (5.25 BAR)
	464	= 69.0 gpd (10.88 lph) / 32.0 gpd (5.05 lph) max pres.: 60 PSI (4.2 BAR)
	465	= 69.0 gpd (10.88 lph) / 24.0 gpd (3.79 lph) max pres.: 60 PSI (4.2 BAR)
	466	= 69.0 gpd (10.88 lph) / 69.0 gpd (10.88 lph) max pres.: 60 PSI (4.2 BAR)

ELECTRICAL:	**XA**	= 115V, 60 Hz
	XB	= 230V, 50 Hz
	XC	= 230V, 60 Hz

LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**AAA**	= Clear PVC / CSPE / Ceramic
	AAB	= Clear PVC / CSPE / TFE
	ABA	= Clear PVC / Viton / Ceramic
	ABB	= Clear PVC / Viton / TFE
	ACA	= Clear PVC / TFE/Viton / Ceramic
	AHA	= Clear PVC / TFE/CSPE / Ceramic
	BAA	= PVC / CSPE / Ceramic
	BAB	= PVC / CSPE / TFE
	BBA	= PVC / Viton / Ceramic
	BBB	= PVC / Viton / TFE
	BHA	= PVC / TFE/CSPE / Ceramic
	DAA	= PP / CSPE / Ceramic
	DAB	= PP / CSPE / TFE
	DBA	= PP / Viton / Ceramic
	DBB	= PP / Viton / TFE
	GFA	= Clear PVC / TFE / Ceramic (dbl)
	GFB	= Clear PVC / TFE / TFE (dbl)
	EFC	= 316SS / TFE / 316SS (dbl)

CONNECTION SIZES:	**A**	= Tubing .44" PVC Suction / .50" PE Discharge
	C	= Tubing .38" PVC Suction / .38" PE Discharge
	F	= Tubing .44" PVC Suction / .50" PE BLK Discharge
	S	= Tubing .38" PVC Suction / .38" PE BLK Discharge
	X w/ 316	= .25" FNPT Suction / .25" FNPT Discharge

SUFFIX CODES:	**XXX**	= Standard
	CZXXX	= CE Appoval
	001	= Current Interrupter
	500*	= Five Function Valve
	520*	= Five Function Degas Valve
	ITS	= 15 gal ITS Tank System

*** Not available in SS. Adder price is per head.**

A completed model number should look like "1445-XA-BAAAXXX"

STANDARD ACCESSORIES

Series 100/150/100D/150D/200: Pumps with tubing connections come with foot valve/strainer/weight, 4' of suction tubing, bleed valve, 4' of return tubing, 8' of discharge tubing, and injection/back pressure valve assembly.

CHEM-TECH *KOPkits*

Chem-Tech KOPkit Selection Guide

KX100 - _ _ _ _

PRODUCT DESIGNATOR:	**KX100**	= Chem-Tech Kopkit
LIQUID END MATERIALS: Head, Diaph., Seats & Balls	**AAA**	= Clear PVC / CSPE / Ceramic
	AAB	= Clear PVC / CSPE / TFE
	ABA	= Clear PVC / Viton / Ceramic
	ABB	= Clear PVC / Viton / TFE
	ACA	= Clear PVC / TFE/Viton / Ceramic
	AHA	= Clear PVC / TFE/CSPE / Ceramic
	BAA	= PVC / CSPE / Ceramic
	BAB	= PVC / CSPE / TFE
	BBA	= PVC / Viton / Ceramic
	BBB	= PVC / Viton / TFE
	BHA	= PVC / TFE/CSPE / Ceramic
	DAA	= PP / CSPE / Ceramic
	DAB	= PP / CSPE / TFE
	DBA	= PP / Viton / Ceramic
	DBB	= PP / Viton / TFE
	GFA	= Clear PVC / TFE / Ceramic (dbl)
	GFB	= Clear PVC / TFE / TFE (dbl)
	EFC	= 316SS / TFE / 316SS (dbl)
CONNECTION :	**A**	= Tubing .44" PVC Suction / .50" PE Discharge
	C	= Tubing .38" PVC Suction / .38" PE Discharge
	F	= Tubing .44" PVC Suction / .50" PE BLK Discharge
	S	= Tubing .38" PVC Suction / .38" PE BLK Discharge
	X w/ 316	= .25" FNPT Suction / .25" FNPT Discharge

SERIES 100, 150, 100D, 150D AND 200 PARTS PRICE SCHEDULE

Part No.	Description
00006	Suction Tubing - per foot 7/16" OD
00007	Suction Tubing - per foot 3/8"
00008	Discharge Tubing - per foot 1/2" OD
00009	Discharge Tubing - per foot 1/2" Black
00010	Discharge Tubing - per foot 3/8"
00011	Discharge Tubing - per foot 3/8" Black
20038	1/2" NPT Connection - PVC - fits Suction side of Pump Head and Back Ck. Vlv. Assy. (per connection)
20039	1/2" NPT Connection - PVC - fits Discharge side of Pump Head and Strainer Assy. (per connection)
J20560	Ball Check (ceramic)
21829	Drive Bracket Assy. S100
21960	Bronze Bushing (right)
21961	Bronze Bushing (left)
21962	Bronze Bushing (center)
21971	Diaphragm Shaft Bushing
22255	Cam Bearing Assy. S100 - 3, 7, 15, 30 GPD
22256	Cam Bearing Assy. S100 - 24 GPD
22257	Cam Bearing Assy. S150 - 68, 100 GPD
23700	Shaft Collar - .38 Small
23701	Shaft Collar - .38 Large
J24269	Oil (quart)
24450	Current Interrupter - S100 - 115V
24452	Current Interrupter - S200 - 115V
24453	Current Interrupter/Plug Receptacle S200 - 115V
24454	Current Interrupter/Plug Receptacle/Bottom Plate (Standard) 115V
24481	Current Interrupter - S100 - 230V
24482	Current Interrupter - S200 - 230V
24820	Cord Assy. - 115V, 60 Hz
24821	Cord - 230V, 50 or 60 Hz
J24960	Coupling Nut, PVC 1/2" (Standard)
24961	Coupling Nut, PP 1/2"
24963	Coupling Nut, PVC 3/8"
25180	Motor Cover
25704	Diaphragm, CSPE
25706	Diaphragm, Viton
25707	Diaphragm, PTFE Coated
J26780	Injection Fitting, PVC 3/8"
26781	Injection Fitting, PVC 1/2"
26858	Bulkhead Fitting (PP-1/2")
26867	Bulkhead Fitting (PP-3/8")
J26907	Bulkhead Fitting (PVC-1/2")
J26908	Bulkhead Fitting (PVC-3/8")

Part No.	Description
J26909	Bulkhead Fitting (PVC-5/16")
J26910	Bulkhead Fitting without strainer (PVC-3/8")
J26905	Bulkhead Fitting for ITS (PVC-1/4")
J27903	Gasket, TFE
27911	Gasket
28210	Gear Housing Assembly #210
28211	Gear Housing Assembly #215
28212	Gear Housing Assembly #220
28213	Gear Housing Assembly #230
28214	Gear Housing Assembly #240
28215	Gear Housing Assembly #260
28216	Gear Housing Assembly #280
28217	Gear Housing Assembly #2-100
28218	Gear Housing Assembly #2-120
28521	Grommet
28800	Head, Clear PVC
28803	Head, Polypropylene
28896	Head Assy, (SST-TFE-SST-1/4" S/D)
28897	Head Assy, (PVC-VT-C-1/2" S/D)
28899	Head Assy, (PP-VT-C-1/2" S/D)
28902	Head Assy, (PVC-VT-C-3/8" S/D)
29036	Head Assy, (PP-VT-C-3/8" D)
29230	Motor Housing
29232	Pump Housing (Duplex)
29313	Main Housing 10, 15, 20, 30, 40, 60, 100 GPD
29314	Main Housing 120 GPD only
30460	Output Adjustment Knob
30467	Output Adj Knob Asm S150
30468	Output Adj Knob Asm S100
J30496	Housing - S100 - 3, 7, 15, 30 GPD
J30497	Housing - S100 - 24 GPD
J30498	Housing - S150, 68, 100 GPD
J30503	Motor - 115V, 60 Hz, S200
J30504	Motor - 230V, 50 Hz, S200
J30505	Motor - 230V, 60 Hz, S200
J30507	Kit, Bleed, Valve, PVC/HPY/ 3/8
J30509	Kit, Bleed, Valve, PVC/VTN/ 3/8
J30510	Kit, Bleed, Valve, PVC/TFE/ 3/8
J30511	Kit, Bleed, Valve, FPP/CSPE/ 3/8
J30513	Kit, Bleed, Valve, FPP/VTN/ 3/8

SERIES 100, 150, 100D, 150D AND 200 PARTS PRICE SCHEDULE

Part Number	Description
J30514	Kit, Bleed, Valve, FPP/TFE/ 3/8
J30515	Kit, Bleed, Valve, PVC/HPY/ 1/2
J30517	Kit, Bleed, Valve, PVC/VTN/ 1/2
J30518	Kit, Bleed, Valve, PVC/TFE/ 1/2
J30519	Kit, Bleed, Valve, FPP/CSPE/ 1/2
L3300V03-FPP	Kit, Bleed, Valve, FPP/VTN/ 1/2
J30522	Kit, Bleed, Valve, FPP/TFE/ 1/2
31081	Locking Lever - S100, 215, 230, 260
31082	Locking Lever 20, 40, GPD S200
31083	Locking Lever - S150, 280, 2-100, 2-120
32520	Motor - 7 SPM, 115V, 60 Hz, 003
32521	Motor - 13 SPM, 115V, 60 Hz, 007
32522	Motor - 25 SPM, 115V, 60 Hz, 015
32523	Motor - 51 SPM, 115V, 60 Hz, 024/030/068
32524	Motor - 7 SPM, 230V, 60 Hz, 003
32525	Motor - 13 SPM, 230V, 60 Hz, 007
32526	Motor - 25 SPM, 230V, 60 Hz, 015
32527	Motor - 51 SPM, 230V, 60 Hz, 024/030/068
32528	Motor - 7 SPM, 230V, 50 Hz, 003
32529	Motor - 13 SPM, 230V, 50 Hz, 007
32530	Motor - 25 SPM, 230V, 50 Hz, 015
32531	Motor - 51 SPM, 230V, 50 Hz, 024/030/068
32532	Motor - 70 SPM, 115V, 60 Hz, 100
32533	Motor - 70 SPM, 230V, 50 Hz, 100
32535	Motor - 70 SPM, 230V, 60 Hz, 100
J34379	Backing Plate
34405	Plate, Motor Cover
34423	Back Plate
34532	Oil Filler Plug w/Cap
J37073	Screw Motor Cover
37080	Output Adjust Screw 10, 20, 40 GPD
37081	Output Adjust Screw 15, 30, 60 GPD
37083	Output Adjust Screw 80, 100, 120 GPD
37088	Output Adj Screw - S150
37089	Output Adj Screw - S100
37300	Oil Seal
J37440	Valve Seat, CSPE
J37442	Valve Seat, Viton
37886	Diaphragm Shaft
38080	Locking Sleeve
38980	Diaphragm Return Spring
38981	Coupling Spring
38984	Valve Spring - top - light
J38985	Valve Spring
J60717	Foot Valve & Strainer Assy (PVD-CSPE-C-3/8")
J60729	Foot Valve & Strainer Assy (PVD-CSPE-C-1/2")
J60718	Foot Valve & Strainer Assy (PVD-VT-C-3/8")
J60730	Foot Valve & Strainer Assy (PVD-VT-C-1/2")
J41540	Valve Housing Discharge, PVC 1/2"
41541	Valve Housing Discharge, PP 1/2"
41543	Valve Housing Discharge, PVC 3/8"
41544	Valve Housing Discharge, PP 3/8"
J41548	Valve Housing Suction, PVC 1/2"
J41834	Valve Housing Suction, PP 1/2"
41551	Valve Housing Suction, PVC 3/8"
J41835	Valve Housing Suction, PP 3/8"

Part Number	Description
41588	Anti-Siphon Valve (PVC-VT-1/2")
41624	Anti-Siphon Valve (PVC-CSPE-1/2") (Standard)
41657	Back Check Valve Assy (PVC-CSPE-C-3/8")
J41658	Back Check Valve Assy (PVC-CSPE-C-1/2")
41659	Back Check Valve Assy (PP-VT-C-1/2")
41661	Back Check Valve Assy (PVC-VT-C-1/2")
41665	Anti-Scale Injector (PVC-CSPE-1/2")
41666	Double Ball Ck Vlv Cart Assy (PVC-3/8") Suct
J41667	Double Ball Ck Vlv Cart Assy (PVC-1/2") Suct
41668	Double Ball Ck Vlv Cart Assy (PVC-3/8") Disch
J41669	Double Ball Ck Vlv Cart Assy (PVC-1/2") Disch
J41694	Back Check Valve Assy (PVC-CSPE-C-1/2")
41695	Back Check Valve Assy (PVC-VT-C-3/8")
41696	Back Check Valve Assy (PP-VT-C-3/8")
41705	6" Ck Vlv Inj Assy (PVC-CSPE-C-3/8")
41707	6" Ck Vlve Inj Assy (PVC-VT-C-3/8")
41708	6" Ck Vlv Inj Assy (PVC-VT-C-1/2")
41709	6" Ck Vlv Inj Assy (PP-VT-C-3/8")
41710	6" Ck Vlv Inj Assy (PP-VT-C-1/2")
41720	Anti-Siphon Valve (PVC-CSPE-1/2" NPT)
41786	Anti-Siphon Valve (PVC-VT-1/2" NPT)
41795	Back Check Valve Assy (PVC-CSPE-C-1/2" x 1/2" NPT)
J42020	Head Bolt Washer SS .20 x .38
J42030	Fiber Washer
42031	Washer, Fiber
J60030	Head Assy (SAN-CSPE-C-3/8" D)
J61222	Kit, 5 Function Valve incl L380DT03-PVC for Series 100/200
J61271	Kit, 5 Function Valve incl L380FT03-PVC for Series 200
J61539	Kit, 5 Function Valve incl L380DT02-PVC for Series 100/200
J61502	Kit, Oil Drain Plug (includes J37002 & J42030)
J61503	Kit, S200 Back Plate Screws (5 - J37017, 5 - J42030)
J61504	Kit, S200 Motor Cover Hdwe (2 - J37002, 2 - J42030)
J61505	Kit, S100 Motor Cover Hdwe (4 - J37032, 2 - J37073)
J61506	Kit, S100 Cam Bearing Set Screw (2 - 37047)
J61507	Kit, S100 Motor Mount Hdwe (3 - 37049)
J61508	Kit, S200 Main Housing Screw (2 - 37021, 2 - J42083, 2 - 42031)
J61509	Kit, S200 Shaft Coupling Motor (1 - 24966, 1 - 37060)
J61510	Kit, S200 Shaft Coupling Gear (1 - 24967, 1 - 37061)
J61511	Kit, Screw Motor Cover (2 - J37073)
J61512	Kit, Valve Seats CSPE (4 - J37440)
J61513	Kit, Ball Checks (4 - J20560)
J61515	Kit, Valve Seats Viton (4 - J37442)
J61516	Kit, Head Mounting Bolts (4 - J37005, 4 - J42020)
J61518	Kit, Gasket TFE (4 - J27903)
L9906700-000	Sinker

SPECIAL ADAPTERS

20013	Pressure Relief Valve Adapter

STAINLESS STEEL PUMP ACCESSORIES

28896	316 SS Head Assy - Double Check Vlv (TFE, SS) 1/4" FPT Conn
J41656	316 SS Double Back Ck Vlv Assembly (TFE, SS) 1/4" FPT Conn
J40095	316 SS Strainer Assy 1/4" FPT Conn
J41640	316 SS Suction Valve 1/4" FPT
J41641	316 SS Discharge Valve 1/4" FPT

CHEM-TECH Mechanical Diaphragm Pumps

Series 250

The Series 250 is a mechanically activated, heavy duty diaphragm feed pump that provide excellent efficiency under strenuous conditions. The Series 250 combines the power and repeatability of piston pumps with the chemical resistance of diaphragm pumps for high pressure applications.

Chem-Tech Series 250 Selection Guide

X25_ - _ _ - _ _ _ Q XXX

MODELS:	**3** = 76.8 gpd (12.11 lph) max pres.: 225 PSI (15.52 BAR) **4** = 108 gpd (17.03 lph) max pres.: 160 PSI (11.03 BAR)
ELECTRICAL:	**XD** = 115V, 50/60 Hz, T.E.F.C. **XL** = 230V, 50/60 Hz, T.E.F.C.
LIQUID END MATERIALS:	**GFA** = PVC / TFE (dbl) / Ceramic
CONNECTION SIZES:	**Q** = 44" PVC Suction / .50" PP Discharge
SUFFIX CODES:	**XXX** = Standard

A complete model should look like "X253-XD-GFAQXXX"

IMPORTANT NOTES:

1. KOPkits are not available for this model.
2. Shipping weight is 21 lbs.

STANDARD ACCESSORIES:

Models with tubing connections come with a footvalve/strainer/weight, 4' of suction tubing, 8' of discharge tubing, and an injection valve.

Models with piping connections come with a strainer and an injection valve.

SERIES 250 PARTS PRICE SCHEDULE

Part No.	Description
00006	Suction Tubing (per foot) 7/16" OD
J00012	Polypropylene Tubing, 1/2" OD - Discharge (per foot)
00013	Polypropylene Tubing, 1/2" OD-Discharge (per ft) - Black
J20560	Ball Check, Ceramic
23705	Collar - Model 253
23706	Collar - Model 254
J24269	Oil (quart)
24820	Cord Assembly, 115V, 60Hz
24821	Cord, 230V, 50-60 Hz
J24960	Coupling Nut - PVC 1/2"
25681	Diaphragm Assembly - Model 253
25682	Diaphragm Assembly - Model 254
J27903	Gasket, TFE
28220	Gear Housing Assembly - Model 253/254
J28815	Pump Head, PVC - Model 253
28816	Pump Head, PVC - Model 254
J28919	Head Assembly, PVC - Model 253 - 1/2"
28920	Head Assembly, PVC - Model 254 - 1/2"

Part No.	Description
29230	Motor Cover / 253 - 254
29313	Pump Housing
30460	Output Adjustment Knob
31084	Locking Lever
32545	Motor, 115/230V, 50/60 Hz, TEFC
34532	Oil Filler Plug with Cap
37084	Adjustment Screw
37886	Diaphragm Shaft
J41658	Back Check Valve Assy (PVC-CSPE-C-1/2")
J41667	Double Ball Check Valve Cart Assy (PVC 1/2") Suction
41668	Double Ball Check Valve Cart Assy (PVC 3/8") Disch
J41669	Double Ball Check Valve Cart Assy (PVC 1/2") Disch
J42020	Bolt Washer (4 required) SS
J60729	Foot Valve & Strainer Assy (PVD-CSPE-C-1/2")
J61272	Kit, 5 Function Valve incl L380KT03-PVC for Series X253
J61516	Kit, Head Mounting Bolts (4 - J37005, 4 - J42020)
J61518	Kit, Gasket TFE (4 - J27930)

CHEM-TECH Mechanical Diaphragm Pumps

Series 300

- Output adjustable from zero to maximum capacity without shutdown
- Completely self-priming
- Corrosion resistant solution-handling components
- Pump assembly has lifetime lubricated mechanical components
- Heavy duty plastic housing for increased corrosion resistance
- Heavy duty speed reducer with oil sight gauge
- Metal and fabric reinforced diaphragm for extra long life
- Maximum operating pressure to 150 psi / 10 BAR

Note: Standard Features do not add to the pump price.
Remember that liquid end adders must be multiplied by the number of pump heads.
PLEASE ADD A CRATING FEE OF $50.00 NET PER PUMP WHEN SHIPPING AIR OR OCEAN FREIGHT.

Chem-Tech Series 300 Selection Guide

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MODELS:	**X310**	= **SIMPLEX** 500 gpd (78.83 lph) max pres.: 150 PSI (10 BAR)
	X320	= **DUPLEX** 1000 gpd (157.71 lph) max pres.: 150 PSI (10 BAR)
	X330	= **TRIPLEX** 1500 gpd (236.54 lph) max pres.: 150 PSI (10 BAR)
	X340	= **QUADRAPLEX** 2000 gpd (315.42 lph) max pres.: 150 PSI (10 BAR)
	313D	= **SIMPLEX** 210 gpd (33.08 lph) max pres.: 150 PSI (10 BAR)
	316D	= **SIMPLEX** 430 gpd (67.79 lph) max pres.: 150 PSI (10 BAR)
	323D	= **DUPLEX** 420 gpd (66.21 lph) max pres.: 150 PSI (10 BAR)
	326D	= **DUPLEX** 860 gpd (135.63 lph) max pres.: 150 PSI (10 BAR)
ELECTRICAL:	**Series 300 Direct Drive Motor (models ending in D, i.e. 316D)**	
	XT	= 115/230V, 50/60 Hz, T.E.F.C.
	Series 300 Motors (models beginning with an X, i.e. X320)	
	XA	= 115V, 60 Hz, single phase, open
	XB	= 230V, 50 Hz, single phase, open
	XC	= 230V, 60 Hz, single phase, open
	XD	= 115V, 60 Hz, single phase, T.E.F.C.
	XG	= 220/440V, 50/60 Hz, 3 phase, open
	XH	= 220/440V, 60 Hz, 3 phase, T.E.F.C.
	XI	= 220/440V, 50/60 Hz, 3 phase, Explosion Proof
	XJ	= 115V, 60 Hz, single phase, Explosion Proof
	XK	= 115V, 50/60 Hz, 1/3 HP, TENV DC motor & SCR Controller, 4-20 (X310 & X320 only)
	XN	= 220/440V, 50 Hz, 3 phase, T.E.F.C.
	XX	= No motor
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	**PER HEAD**	
	BHA	= PVC / CSPE / Ceramic
	BHB	= PVC / CSPE / TFE
	BCA	= PVC / Viton / Ceramic
	BCB	= PVC / Viton / TFE
	DHA	= PP / CSPE / Ceramic
	DHB	= PP / CSPE / TFE
	DCA	= PP / Viton / Ceramic
	DCB	= PP / Viton / TFE
	EFC	= 304 / 304 / 316
*** Diaphragms are all PTFE faced.**		
CONNECTION SIZES:	**A**	= Tubing .44" PVC Suction / .50" PE Discharge
	X w/ PVC	= Tubing .50" MNPT Suction / .50" MNPT Discharge
	X w/ 316	= Tubing .50" MNPT Suction / .50" MNPT Discharge
SUFFIX CODES:	**XXX**	= Standard

A completed model number should look like "X330-XD-AHAAXXX"

IMPORTANT NOTE: KOPkits not available for this model.

STANDARD ACCESSORIES:

Models with tubing connections come with a foot valve/strainer/weight, 4' of suction tubing, 8' of discharge tubing, and an injection valve.
Models with piping connections come with a strainer and an injection valve.

SERIES 300 PARTS PRICE SCHEDULE

Part Number	Description
00006	Suction Tubing (per foot) 7/16" OD - PVC
00008	Discharge Tubing Polyethylene (per foot) 1/2" OD
J20560	Ball Check (Ceramic)
20700	Base-Simplex
20843	Drive Bearing
20844	Main Shaft Bearing
20980	V-Belt
21407	Head Bolt, 1/4" - 20 x 2,2, Stainless Steel
21409	Head Bolt, 1/4" - 20 x 10,5, Stainless Steel
21821	Bracket
22253	Cam
23702	Locking Collar
J23723	Collar, Suction Swivel Assy
J24960	Coupling Nut, PVC 1/2" (Standard)
25712	Diaphragm, PTFE Coated
J26780	Injection Fitting
J27903	Gasket, TFE
27906	Gasket, Viton
28661	Belt Guard
J28814	Head, PVC
28809	SST Head 304
28813	Polypropylene Head
28939	Head Assembly, Acrylic (SAN-CSPE-C) 1/2"
28940	Head Assembly, PVC (PVC-CSPE-C)
29074	Polypropylene Head Assy
29107	SST Head Assy 304
29237	Housing Back Plate
29238	Pump, Housing Simplex
29297	Pump Housing, Assembly w/Fitting & Tubing (SAN-CSPE-C)
J30120	Reducer Input Shaft Key
30121	Main Shaft Key
30461	Output Adjusting Knob
32590	Motor (Standard) 1/3 hp, 115V, 60Hz ODP
32970	Adjusting Screw Lock Nut
33081	O Ring Seal - CSPE
33761	Output Indicator Pin
35220	Pulley (4-step) - Motor
35221	Pulley (4-step) - Reducer
J35918	Speed Reducer 60:1
J36395	Cam Bearing Locking ring
J37440	Valve Seat, CSPE
J37442	Valve Seat, Viton
37447	Valve Seat, Viton
37887	Main Shaft
37888	Output Adjusting Shaft
37889	Diaphragm Shaft
38982	Diaphragm Return Spring
38983	Valve Spring
39180	Sprocket - Motor
39181	Sprocket - Reducer
40087	Strainer Assembly - PP - CSPE - C - 1/2"
J41548	Valve Housing PVC 1/2"
41565	Valve Housing Discharge PVC
41566	Valve Housing Suction PVC
41568	Valve Seat, Suction - PVC
41637	Back Check Valve Assembly (PVC - CSPE - C - 1/2")
41638	Back Check Valve Assy (PVC - CSPE - C - 1/2")
41677	Valve Seat Suction Assembly
J61519	Kit, Gasket CSPE (2 - 27905)
J61520	Kit, Valve Seat CSPE (2 - 37446)
J61521	Kit, Acorn Nut Set (10 - 32960, 10 - 42022)
J61522	Kit, Output Indicator (2 - 37030, 1 - 34381)
J61523	Kit, Coupling Chain (1 - 24976, 1 - 33765, 1 - 36400)
J61526	Kit, Valve Components (2 - 37446, 2 - 27905, 2 - L1000500-ALA)
J61527	Kit, Suction Swivel Base (1 - 20705, 1 - 37040)
J61528	Kit, Head Bolt 2,2" (2 - 21407, 2 - 32960, 2 - 42022)
L1000500-ALA	Ball Check - Ceramic

CHEM-TECH Piston Pumps

Series 400

- Precise metering over entire pressure and output range
- Fully adjustable output capacities from 0 to 34 gph / 128.52 lph, depending on model*
- Rugged piston design, corrosion resistant metals and solution handling components for the most severe applications
- Heavy-duty plastic pump body for increase corrosion resistance
- Operating pressures up to 800 psi / 55.17 BAR
- Low maintenance design
- Available in Simplex, or Duplex for multi-chemical feed
- Metering adjustment accomplished without shutdown

*Actual feed rates will vary depending on solution viscosity and actual operating pressure

Note: Standard Features do not add to the pump price.
Remember that liquid end adders must be multiplied by the number of pump heads.
PLEASE ADD A CRATING FEE OF $50.00 NET PER PUMP WHEN SHIPPING AIR OR OCEAN FREIGHT.

Chem-Tech Series 400 Selection Guide

X _ _ _ - _ _ - _ _ _ _ XXX

MODELS:	Piston Diameter		
	405 = **Simplex**	1/4"	0.5 gph (1.89 lph) max pres.: 800 PSI (55.17 BAR)
	406 = **Duplex**	1/4"	1.0 gph (3.76 lph) max pres.: 800 PSI (55.17 BAR)
	409 = **Simplex**	3/8"	0.81 gph (3.06 lph) max pres.: 800 PSI (55.17 BAR)
	410 = **Duplex**	3/8"	1.72 gph (6.50 lph) max pres.: 800 PSI (55.17 BAR)
	413 = **Simplex**	1/4"	1.0 gph (3.78 lph) max pres.: 800 PSI (55.17 BAR)
	414 = **Duplex**	1/4"	2.00 gph (7.56 lph) max pres.: 800 PSI (55.17 BAR)
	417 = **Simplex**	3/8"	1.62 gph (6.12 lph) max pres.: 800 PSI (55.17 BAR)
	418 = **Duplex**	3/8"	3.24 gph (12.25 lph) max pres.: 800 PSI (55.17 BAR)
	425 = **Simplex**	1/2"	1.65 gph (6.24 lph) max pres.: 800 PSI (55.17 BAR)
	426 = **Duplex**	1/2"	3.3 gph (12.47 lph) max pres.: 800 PSI (55.17 BAR)
	429 = **Simplex**	5/8"	3.10 gph (11.72 lph) max pres.: 800 PSI (55.17 BAR)
	430 = **Duplex**	5/8"	6.2 gph (23.44 lph) max pres.: 800 PSI (55.17 BAR)
	433 = **Simplex**	1/2"	3.3 gph (12.47lph) max pres.: 800 PSI (55.17 BAR)
	434 = **Duplex**	1/2"	6.6 gph (24.95 lph) max pres.: 800 PSI (55.17 BAR)
	437 = **Simplex**	5/8"	6.2 gph (23.44 lph) max pres.: 800 PSI (55.17 BAR)
	438 = **Duplex**	5/8"	12.4 gph (46.87 lph) max pres.: 800 PSI (55.17 BAR)
	441 = **Simplex**	1"	8.5 gph (32.13 lph) max pres.: 300 PSI (20.69 BAR)
	442 = **Duplex**	1"	17.0 gph (64.25 lph) max pres.: 300 PSI (20.69 BAR)
	445 = **Simplex**	1"	17.0 gph (64.25 lph) max pres.: 300 PSI (20.69 BAR)
	446 = **Duplex**	1"	34.0 gph (128.52 lph) max pres.: 300 PSI (20.69 BAR)

ELECTRICAL:	
XT	= 115/230 V, 50/60 Hz, T.E.F.C.

LIQUID END MATERIALS:	PER HEAD	Based on Piston Diameter
Pump Head & Fittings/ Packing & Balls	**<1"**	
	EFA = 303 SS / TFE / Ceramic	
	EFC = 303 SS / TFE / 316 SS	
	≥1"	
	EFC = 304 SS / TFE / 316 SS	
	EFB = 304 SS / TFE / TFE	

CONNECTION SIZES:			
X	=	< 1"	1/4" FNPT Suction / 1/4" FNPT Discharge
X	=	≥ 1"	1/2" FNPT Suction / 1/2" FNPT Discharge

SUFFIX CODES:	
XXX	= Standard

A completed model shold look like "X413-XT-EFAXXXX"

CHEM-TECH Piston Pumps

Series 500

- Completely adjustable while running
- Easily field calibration
- Materials of construction for metering chemicals for industrial and agricultural uses
- Consistent repeatability of output
- Easy maintenance due to interchangeability or most wetted components
- Available in Simplex or Duplex configurations
- Wide range of output and pressure capability

Note: Standard Features do not add to the pump price.
Remember that liquid end adders must be multiplied by the number of pump heads.
PLEASE ADD A CRATING FEE OF $50.00 NET PER PUMP WHEN SHIPPING AIR OR OCEAN FREIGHT.

Chem-Tech Series 500 Selection Guide

X_ _ _ - _ _ - _ _ _ X XXX

MODELS:	Piston Diameter		
541	= **Simplex**	1"	6.97 gph (26.38 lph) max pres.: 500 PSI (34.48 BAR)
542	= **Duplex**	1"	13.95 gph (52.76 lph) max pres.: 500 PSI (34.48 BAR)
545	= **Simplex**	1"	13.7 gph (51.85 lph) max pres.: 500 PSI (34.48 BAR)
546	= **Duplex**	1"	27.41 gph (103.71 lph) max pres.: 500 PSI (34.48 BAR)
548	= **Simplex**	1"	27.65 gph (104.65 lph) max pres.: 500 PSI (34.48 BAR)
572	= **Duplex**	1"	55.30 gph (209.31 lph) max pres.: 500 PSI (34.48 BAR)
551	= **Simplex**	1 1/4"	10.89 gph (41.24 lph) max pres.: 300 PSI (20.69 BAR)
552	= **Duplex**	1 1/4"	21.78 gph (82.48 lph) max pres.: 300 PSI (20.69 BAR)
553	= **Simplex**	1 1/4"	21.41 gph (81.06 lph) max pres.: 300 PSI (20.69 BAR)
554	= **Duplex**	1 1/4"	42.82 gph (162.12 lph) max pres.: 300 PSI (20.69 BAR)
559	= **Simplex**	1 1/4"	43.20 gph (163.54 lph) max pres.: 300 PSI (20.69 BAR)
560	= **Duplex**	1 1/4"	86.40 gph (327.08 lph) max pres.: 300 PSI (20.69 BAR)
561	= **Simplex**	1 1/2"	15.69 gph (59.38 lph) max pres.: 200 PSI (13.79 BAR)
562	= **Duplex**	1 1/2"	31.38 gph (118.77 lph) max pres.: 200 PSI (13.79 BAR)
563	= **Simplex**	1 1/2"	30.83 gph (116.69 lph) max pres.: 200 PSI (13.79 BAR)
564	= **Duplex**	1 1/2"	61.66 gph (233.38 lph) max pres.: 200 PSI (13.79 BAR)
569	= **Simplex**	1 1/2"	62.21 gph (235.46 lph) max pres.: 200 PSI (13.79 BAR)
570	= **Duplex**	1 1/2"	124.42 gph (470.93 lph) max pres.: 200 PSI (13.79 BAR)

ELECTRICAL:	
XA	= 115V, 60 Hz, single phase, open
XB	= 230V, 50 Hz, single phase, open
XC	= 230V, 60 Hz, single phase, open
XD	= 115V, 60 Hz, single phase, T.E.F.C.
XG	= 220/440V, 50/60 Hz, 3 phase, open
XH	= 220/440V, 60 Hz, 3 phase, T.E.F.C.
XI	= 220/440V, 50/60 Hz, 3 phase, Explosion Proof
XJ	= 115V, 60 Hz, single phase, Explosion Proof
XN	= 220/440V, 50 Hz, 3 phase, T.E.F.C.

LIQUID END MATERIALS: Pump Head & Fittings/ Packing & Balls	PER HEAD Based on Piston Diameter
	=1"
EFC	= 304 SS / TFE / 316 SS
EFB	= 304 SS / TFE / TFE
	=1 1/4"
EFC	= 304 SS / TFE / 316 SS
EFB	= 304 SS / TFE / TFE
	=1 1/2"
EFC	= 304 SS / TFE / 316 SS
EFB	= 304 SS / TFE / TFE

CONNECTION SIZES:			
X	=	< 1"	1/4" FNPT Suction / 1/4" FNPT Discharge
X	=	≥ 1"	1/2" FNPT Suction / 1/2" FNPT Discharge

SUFFIX CODES:	
XXX	= Standard

A completed model number should look like "X545-XJ-EFCXXXX"

SERIES 400 and SERIES 500 PARTS

SERIES 400 PARTS

Part Number	Description
J20723	Pump Base (Simplex)
20703	Pump Base (Duplex)
20845	Main bearing (closed)
21965	Main Shaft Motor Bushing
21964	Outboard Bearing
26810	Grease Relief Fitting
26811	Grease Fitting
28200	Gear/Shaft Assy - 30RPM, 115V OPD Simp
28202	Gear/Shaft Assy - 60 RPM, 115V OPD Simp
29246	Housing Set Assy S400 Simplex & Duplex
29249	Housing Set Assy S400 Duplex
30125	Main Shaft Key
32632	Motor Assy w/Shaft 60 RPM 115V ODP-Simp
32634	Motor Assy w/Shaft 30 RPM 115V ODP-Dup
32645	Motor Assy w/Shaft 60 RPM 115V ODP-Dup
32646	Motor Assy w/Shaft 30 RPM 115V ODP-Simp
32648	Shaft Assy, Coupled
J32749	MTR, 30 RPM 115/230V TEFC
J32750	MTR, 60 RPM 115/230V TEFC
J32943	Mounting Nut (4 req)
32971	Adjustment Screw Lock Nut
33764	Slide Pin
36396	Main Shaft Locking Ring
J37054	Set Screw 1/4" - 20 x 3/4"
37090	Adjustment Screw
37305	PVC Seal (2 req)
37891	Main Shaft (Duplex)
38221	Slide (Simplex / Duplex)
38224	Slide Arm Assembly (Simplex)
38225	Slide Arm Assembly (Duplex)
38988	Valve Spring (2 req)
41672	Discharge Check Valve Assy 1/4" FPT
41674	Suction Check Valve Assy 1/4" FPT
J61530	Kit, Main Shaft (Simp, TEFC) (1 - 37899, 3 - D4844-31)
J61531	Kit, Main Bearing Cam (1 - 22263, 1 - 33771)
J61532	Kit, Housing Set Hdw e (2 - 21407, 2 - 21406, 2 - 42022, 2 - 42035, 4 - 32942)
L1000400-ALA	Ceramic Ball 1/4" (2 req)
L1000500-ALA	Ceramic Ball 3/8" (2 req)
	A-PISTON HEAD ASSEMBLY
28925	5/8" Bore CRS
28929	5/8" Bore Stainless Steel
28930	1/2" Bore Stainless Steel
28931	3/8" Bore Stainless Steel
28932	1/4" Bore Stainless Steel
	B-PISTON
34180	1/4" Diameter 303 SS
34182	3/8" Diameter 303 SS
34184	1/2" Diameter 303 SS
34186	5/8" Diameter 303 SS
	C-PACKING NUT
32972	1/4" Bore
32973	3/8" Bore
32974	1/2" Bore
32975	5/8" Bore
	D-PACKING SET
33420	1/4" Bore (Neoprene - Standard)
33421	3/8" Bore (Neoprene - Standard)
33422	1/2" Bore (Neoprene - Standard)
33423	5/8" Bore (Neoprene - Standard)
33427	1/4" Bore (TFE - Optional)
33428	3/8" Bore (TFE - Optional)
33429	1/2" Bore (TFE - Optional)
33430	5/8" Bore (TFE - Optional)
	E-GREASE GLAND
28380	1/4" Bore
28380	3/8" Bore
28381	1/2" Bore
28381	5/8" Bore

Part No.	Description
	F-PUMP HEAD
28821	1/4" Bore Stainless Steel S-Series
28823	3/8" Bore Stainless Steel S-Series
28825	1/2" Bore Stainless Steel S-Series
28826	5/8" Bore CRS
28827	5/8" Bore Stainless Steel S-Series
J24960	Coupling Nut (2 req)
J41667	Double Ball Check Valve Cartridge (Suction)
J41669	Double Ball Check Valve Cartridge (Discharge)

SERIES 500 PARTS

20579	SS Ball 7/16" (2 req)
20580	SS Ball 11/16" (2 req)
20704	S500 Base (Simplex or Duplex)
21970	Bronze Bushing
25004	Delrin Motor Coupling Assy
29290	Housing Set Assy 115 SPM Simplex-Duplex
29291	Housing Set Assy 115 SPM Duplex
29247	Housing Set Assy S500 Simplex-Duplex
29248	Housing Set Assy S500 Duplex
32590	Motor 1/3" HP 56 FR, 115V, Open
33082	O-Ring, Head Cap, VT-1,859 x ,139
33083	O-Ring, Head Cap, VT-2,359 x ,139
33767	Pin - Suction Check Valve
J35913	Speed Reducer, 115 SPM
J35916	Speed Reducer, 57 SPM
J35918	Speed Reducer, 29 SPM
37053	Piston Set Screw
37306	PVC Seal (2 req)
38710	Spacer, packing 1"
38711	Spacer, packing 1-1/4"
38712	Spacer, packing 1-1/2"
38986	Spring-Packing Compression 1"
38987	Spring-Packing Compression 1-1/4" & 1-1/2"
38989	Valve Spring
41673	Discharge Check Valve Assy 1/2" FPT
41675	Suction Check Valve Assy 1/2" FPT
J61523	Kit, Coupling Chain (1 - 24976, 1 - 33765, 1 - 36400)
J61531	Kit, Main Bearing Cam (1 - 22263, 1 - 33771)
J61536	Kit, Coupling Shaft (1 - 24984, 1 - 37059, 1 - 37047)
J61537	Kit, Main Shaft (1 - 30121, 1 - 37894)
	G-SERIES 500 PUMP HEAD
28829	1" Bore Stainless Steel S-SERIES
28831	1-1/4" Bore Stainless Steel S-SERIES
28831	1-1/2" Bore Stainless Steel S-SERIES
	G-SERIES 500 PUMP HEAD CAP
28841	1" Stainless Steel
28843	1-1/4" & 1-1/2" Stainless Steel
	H-SERIES 500 PISTON
34188	1" Diameter 303 SS
34189	1-1/4" Diameter 303 SS
34190	1-1/2" Diameter 303 SS
	I-SERIES 500 PACKING SET
33424	1" Bore (Neoprene - Standard)
33425	1-1/4" Bore (Neoprene - Standard)
33426	1-1/2" Bore (Neoprene - Standard)
33431	1" Bore (TFE - Optional)
33432	1-1/4" Bore (TFE - Optional)
33433	1-1/2" Bore (TFE - Optional)
	J-SERIES 500 PISTON HEAD ASSEMBLY
28934	1" Bore Stainless Steel
28935	1-1/4" Bore CRS
28936	1-1/4" Bore Stainless Steel
28937	1-1/2" Bore CRS
28938	1-1/2" Bore Stainless Steel

***Series 400-500 1" parts are interchangeable.**

MEC-O-MATIC DIAPHRAGM PUMPS

STINGRAY Series 100 & 200

- Versatility: range of models, offering feed rates from 8 GPD to 90 GPD, and operating pressures up to 100 PSI
- Durability: rugged, chemical-resistant plastic casing, and corrosion-resistant rubber and plastic solution handling components
- Long Life: PTFE coated diaphragm and viton seals, for long life even in highly corrosive applications
- Reliability: spring-loaded check valves for high reliability.

Mec-O-Matic STINGRAY 100 and 200 Series Selection Guide

US_ _ _ | _ _ | - | BCA | K | XXX

MODELS:	**Series 100** **105** = 8.0 gpd (1.26 lph) max pres.: 100 PSI (6.90 BAR) **110** = 12.0 gpd (1.89 lph) max pres.: 100 PSI (6.90 BAR) **125** = 30.0 gpd (4.73 lph) max pres.: 100 PSI (6.90 BAR) **150** = 60.0 gpd (9.46 lph) max pres.: 100 PSI (6.90 BAR) **175** = 90.0 gpd (14.19 lph) max pres.: 60 PSI (4.14 BAR) **Series 200** **205** = 8.0 gpd (1.26 lph) max pres.: 100 PSI (6.90 BAR) **210** = 12.0 gpd (1.89 lph) max pres.: 100 PSI (6.90 BAR) **225** = 30.0 gpd (4.73 lph) max pres.: 100 PSI (6.90 BAR) **250** = 60.0 gpd (9.46 lph) max pres.: 100 PSI (6.90 BAR) **275** = 90.0 gpd (14.19 lph) max pres.: 60 PSI (4.14 BAR)
ELECTRICAL:	**XA** = 115V, 60 Hz
LIQUID END MATERIALS:	**BCA** = PVC / Viton / Ceramic
CONNECTION SIZES:	**K** = Tubing .38" PVC Suction / .38" PE Discharge
SUFFIX CODES:	**XXX** = Standard

A completed model should look like "US110XA-BCAKXXX"

1. Maximum GPD Rating is at Zero PSI.
2. Standard material of construction is: PVC head/fittings, Viton Seats, PTFE faced diaphragm, spring loaded ceramic balls, 4 ft. 3/8" PVC suction tubing, 8 ft. 3/8" polyethelene discharge tubing.
3. KOPkit includes head assembly, diaphragm and head screws.
4. Shipping weight is 8 lbs

STINGRAY Electro Mechanical Series

Mec-O-Matic STINGRAY ELECTRO MECH. Selection Guide

US_ _ _ | _ | XA | BCA | K | XXX

MODELS:	**105** = 8.0 gpd (1.26 lph) max pres.: 100 PSI (6.90 BAR) **110** = 12.0 gpd (1.89 lph) max pres.: 100 PSI (6.90 BAR) **205** = 8.0 gpd (1.26 lph) max pres.: 100 PSI (6.90 BAR) **210** = 12.0 gpd (1.89 lph) max pres.: 100 PSI (6.90 BAR)
TIMER:	**D** = 24 Hour Timer **W** = 7 Day Timer
ELECTRICAL:	**XA** = 115V, 60 Hz
LIQUID END MATERIALS:	**BCA** = PVC / Viton / Ceramic
CONNECTION SIZES:	**K** = Tubing .38" PVC Suction / .38" PE Discharge
SUFFIX CODES:	**XXX** = Standard

A completed model should look like "US110DXABCAKXXX"

1. Available in 115V 60 cycle only.
2. Maximum GPD Rating is at Zero PSI.
3. Standard material of construction is: PVC head/fittings, Viton Seats, PTFE faced diaphragm, spring loaded ceramic balls, 4 ft. 3/8" PVC suction tubing, 8 ft. 3/8" polyethelene discharge tubing.

MEC-O-MATIC *KOPkits*

Mec-O-Matic STINGRAY KOPkit Selection Guide

KUSR_ - BCA K

PRODUCT DESIGNATOR:	**1**	= Series 100
	2	= Series 200
LIQUID END MATERIALS: Head, Diaph., Seats & Balls	**BCA**	= PVC / Viton / Ceramic
CONNECTION :	**K**	= Tubing .38" PVC Suction / .38" PE Discharge

STINGRAY SERIES PARTS PRICE SCHEDULE

Part No.	Description
41403	Discharge Tubing 8 ft PE 3/8"
J41424	Suction tubing 4 ft PVC 3/8"
U0810545	Spring Clutch
U0811279	Pump Head Series 200
U0817888	Shoulder Screw 10 - 24 X ,58
U0811861	Head Cover Series 100
U0812318	Pump Head Series 100
U0814211	Compression Nut
U0818143	Drive Block
U0818148	Drive Plate
U0818215	Motor Housing
U0818226	Regulator Housing
U0818227	Regulator Top Cover
U0818256	Output Adjustment Knob
U0818257	Wear Plate
U0818258	Adjustment Knob Bushing
U0818339	Adjustment Plate
U0818340	Adjustment Shaft Assembly
U8800412	Tubing Assy, 15', 3/8"
U8800456	Foot Valve Strainer 3/8" OD Tubing (viton)
U8800470	Diaphragm Kit
U8800525	Relief/Release Plunger Kit (viton)
U8800554	Cartridge Valve Kit Series 100 (viton)
U8800606	Injection Fitting

Part No.	Description
U8800656	Kit, SR Drive Block Conversion
U8800701	Head Assembly Series 100
U8800703	Head Assembly Series 200
U8800704	Valve Kit Series 200 (viton)
U8800729	Kit, Head Bolt S100 (4 - U0810036, 4 - L9801300-188)
U8800730	Kit, Head Bolt S200 (4 - U0813501, 4 - L9801300-188)
U8800732	Kit, Foot Pads (4 - U0818379)
U8800735	Kit, Spring (2 - U0812915)
L9900700-0C	Strain Relief
U0818406	Motor, SR 105/205, 120V, 60Hz
U0818407	Motor, SR 105/205, 240V, 50/60Hz
U0818408	Motor, SR 110/210, 120V, 60Hz
U0818409	Motor, SR 110/210, 240V, 50/60Hz
U0818410	Motor, SR 125/225, 120V, 60Hz
U0818411	Motor, SR 125/225, 240V, 50/60Hz
U0818412	Motor, SR 150/250, 120V, 60Hz
U0818413	Motor, SR 150/250, 240V, 50/60Hz
U0818414	Motor, SR 175/275, 120V, 60Hz
U0818415	Motor, SR 175/275, 240V, 50/60Hz
24820	Power Cord 120V
24821	Power Cord 240V
U0818561	Timer Assy, 24 hr (SR Electro Mech)
U0818562	Timer Assy, 7 Day (SR Electro Mech)
U0818564	Motor Fan SR 105, 110, 205, 210

MISCELLANEOUS TUBING

Part No.	Description
U0811307	Tube PE, Transparent, 1/4" OD X 100 ft.
J41447	Tube PE, White, 3/8" OD X 100 ft.
U0818134	Viton Peri. Tube, 7/16" OD X 9"

Part No.	Description
U0818324	Viton Peri. Tube, 3/8" OD X 9"
U0818654	Nozzle Assembly
U0818994	Tube PE, Black, 1/4" OD X 15 ft.

MEC-O-MATIC *WAREWASH PUMPS*

Series T-2000 Misting System

- Consistent misting pattern for maximum effectiveness.
- Diaphragm metering pump provides capacity of 180cc/6 oz. per minute at 100 *PSI.*
- Wide angle misting nozzle provides optimum pattern.

Mec-O-Matic Series T-2000 Selection Guide

US275 XA - BCXX112

MODELS:	**US275**	= 6 oz. per minute max pres.: 100 PSI (6.90 BAR)
ELECTRICAL:	**XA**	= 115V, 60 Hz
LIQUID END MATERIALS:	**BCXX112**	= PVC / Viton / Ceramic

1. Standard system includes SR275 pump, 24 hour timer, spray nozzle and tubing in a lockable metal cabinet with an industrial gray finish.
2. Available in 115 volt only.

MEC-O-MATIC PERISTALTIC PUMPS

Dolphin Series

- Exclusive quick-release, twist-off, clear polycarbonate, acid-resistant head to withstand the harshest environment.
- Self-lubricating chemical resistant roller assembly.
- Durable, long lasting tubing with no tube adjustment.
- Rugged and dependable – Heavy-duty shaded pole gearmotor with lifetime lubrication.
- Flexibility in feed rates - from .13 gallons to 97 gallons per day ... to meet the demands of the pool and spa industry, and elsewhere.
- Agency approvals.

Mec-O-Matic DOLPHIN Series Selection Guide

UD_ _ - _ _ - _ _ _ U XXX

MODELS:	10	= 13.0 gpd (2.05 lph) max pres.: 25 PSI (1.72 BAR)
	50	= 60.0 gpd (9.46 lph) max pres.: 25 PSI (1.72 BAR)
	75	= 97.0 gpd (15.30lph) max pres.: 25 PSI (1.72 BAR)
ELECTRICAL:	XA	= 115V, 60 Hz
	XL	= Standard 230V, 50/60 Hz, used w / Model 10 only
	XB	= Standard 230V, 50 Hz, used w / Models 50 & 75 only
	XC	= Standard 230V, 60 Hz, used w / Models 50 & 75 only
LIQUID END MATERIALS:	LSA	= Norprene Tubing
	LBA	= Viton Tubing
CONNECTION SIZES:	U	= Tubing .25" I.D. X .44" O.D.
SUFFIX CODES:	XXX	= Standard

A completed model should look like "UD75-XA-LBAUXXX"

Mec-O-Matic DOLPHIN KOPkit Series Selection Guide

KUDXX-LSAU	= Standard KOPkit for all Dolphin Pumps (includes head& tube assembly

Junction Box option is available on 230V models at no additional charge. Contact the factory for model numbers.
Shipping weight for Dolphin Pumps is 7 lbs.

MEC-O-MATIC KOPkits

Mec-O-Matic DOLPHIN KOPkit Selection Guide

KUDXX - _ _ _ _

PRODUCT DESIGNATOR:	KUDXX	= Dolphin Kopkit
LIQUID END MATERIALS:	LSAU	= Norprene Tubing CRM
	LLAU	= Norprene Tubing BLK
	LBAU	= Viton Tubing

DOLPHIN SERIES PARTS PRICE SCHEDULE

Part No.	Description
J60552	Strainer Assembly w /o valve
24820	Pow er Cord 120V
24821	Pow er Cord 240V
U0817630	Lead Assembly
U0817635	Knob
U0817923	Sw itch, Rocker
U0817942	Screw 10 - 32 X .688", Motor Mount
U0819142	Box, Front
U0819143	Box, Back
U0818180	Potentiometer Assembly
U0818564	Fan D10 (CW)
U0818565	Fan D50, D75 (CCW)
U0812955	Screw 8 - 32 X 1/4", Fan
L9900700-000	Strain Relief

Part No.	Description
U0818616	Gearmotor Assembly, 120V, 10 RPM - D10
U0818617	Gearmotor Assembly, 240V, 10 RPM - D10
U0818618	Gearmotor Assembly, 120V, 50 RPM - D50
U0818619	Gearmotor Assembly, 240V, 50 RPM - D50
U0818620	Gearmotor Assembly, 120V, 75 RPM - D75
U0818621	Gearmotor Assembly, 240V, 75 RPM - D75
U8800431	Tubing cut 1/4" X 15 ft. PE
U8800637	Tubing Replacement Kit (7/16"Norprene Crm)
U8800651	Pump Head Assembly
U8800712	Injection Fitting
U8800740	Kit, Timer 120V (1 - U0818183, 1 - U0020522)
U8800741	Kit, Timer 240V (1 - U0818460, 1 - U0020522)
U8800742	Kit, Pump Head Bearings (2 - U0817121)
U8800743	Kit, Collars (2 - U0817123)
U8800758	Kit, Pump Head Tubing (Viton)

MEC-O-MATIC *PERISTALTIC PUMPS*

VSP Series

- Versatile - The VSP is engineered to dispense low volumes of chemicals at exacting amounts.
- Reliable – Heavy-duty gearmotor... fieldtested, proven peristaltic head... durable chemical-resistant housing.
- Low Maintenance – Self-lubricating roller assembly... NO tube adjustment required... exclusive quick-release, twist-off head.
- Guaranteed – Full one year warranty on dispenser.

Mec-O-Matic VSP Series Selection Guide

UVSP_ _ _ _ _ _ U XXX

MODELS:	**12**	= 12.0 gpd (1.89 lph) max pres.: 25 PSI (1.72 BAR)
	20	= 20.0 gpd (3.15 lph) max pres.: 25 PSI (1.72 BAR)
ELECTRICAL:	**XP**	= 24VAC
	XR	= 120V 50/60 Hz
LIQUID END MATERIALS:	**LLA**	= Norprene Tubing
	LBA	= Viton Tubing
CONNECTION SIZES:	**U**	= Tubing .19" I.D. X .38" O.D. used w/ UVSP12 only
	U	= Tubing .25" I.D. X .44" O.D. used w/ UVSP20 only
SUFFIX CODES:	**XXX**	= Standard

A completed model should look like "UVSP12XRLLAUXXX"

Shipping weight for all VSP pumps is 6 lbs.

VSP SERIES PARTS PRICE SCHEDULE

Part Number	Description
J60552	Strainer w/o Valve
U0817122	Collar VSP - 12
U0817123	Collar VSP - 20
U0817742	Hose Clamps
U0817923	Switch
24820	Power Cord 120 V
U0819142	Front Housing
U0819143	Rear Assembly
L9710200-000	Lead Assembly
U0818083	Hole Plug
U0818305	Printed Circuit Board 24V
U0818306	Printed Circuit Board 120V
U0818320	Power Cord 24V
U0818463	Fuse 24V, 1/2 Amp
U0818464	Fuse 120V, 1/8 Amp
U0818667	Gearmotor Kit
U7013397	Tube Kit VSP - 20
U8800431	15" X 1/4" Poly Tubing
U8800651	Pump Head Kit
U8800700	Tube Kit VSP - 12
U8800712	IPF Auto Clean Injection Fitting
U8800739	Kit, Motor Mount (2 - U0818666, 2 - 32946, 2 - U0811297)
U8800742	Kit, Pump Head Bearings (2 - U0817121)
L9900700-000	Strain Relief

MEC-O-MATIC PERISTALTIC PUMPS

Series 2400T Grease Trap Dispenser

- Capable of Dispensing Low Volumes
- Programmable
- Simple Installation
- Prime Push Button for Quick Start-Up
- Quick Release Twist Off Head
- Built-In Timer
- No Tube Adjustment Needed
- Self Lubricating Roller Assembly

Mec-O-Matic 2400T Series Selection Guide

UT24 ___ - __ _U ___

MODELS:	**UT24**	= 2.5 gpd (0.39 lph) max pres.: 25 PSI (1.72 BAR) used w / 2400T & 2400T PLUS
	UT24	= 3.0 Oz / 1 Min max pres.: 25 PSI (1.72 BAR) used w / 2400T-DC only
ELECTRICAL:	**-XA**	= 115V, 60 Hz used w / 2400T only
	PXA	= 115V, 60 Hz used w / 2400T PLUS only
	-AD	= 12V DC used w / 2400T-DC only
LIQUID END MATERIALS:	**LT**	= Silicone Tubing
	LB	= Viton Tubing
	LL	= Norprene Tubing used w / 2400T-DC only
CONNECTION SIZES:	**AU**	= Tubing .125" I.D. X .31" O.D.
	XU	= Tubing .25" I.D. X .44" O.D. used w / 2400T-DC only
SUFFIX CODES:	**XXX**	= Standard
	109	= Lockable Latch Cover used w / 2400T PLUS only

A completed model should look like "UT24-XA-LBAUXXX"

1. 2400T comes standard with 24 hour mechanical timer. 2400T plus and DC utilizes a 7 day, 8 event programmable timer
2. 2400T DC Pump requires 8 "D" cell batteries (not included).
3. Shipping weight is 7.5 lbs.

2400T & T PLUS SERIES PARTS PRICE SCHEDULE

Part No.	Description
J60552	Strainer Assembly w /o Valve
U0814047	Wire Clip
U0817131	Tubing Assy 5/16" X 9" Silicone
U0817133	Pump Cover (Backing Plate)
U0817742	Hose Clamp
U0817888	Pump Head Screw
U0817942	Screw 10 - 30 X .688", Motor Mount
U0817952	Timer (2400T)
U0818018	Indicator Light
U0819145	Pump Housing (front-2400T Plus)
U0819144	Pump Housing (front-2400T)

Part No.	Description
U0819143	Pump Housing (rear)
U0818061	Toggle Sw itch
U0818084	Lead Assembly 4.5" Yellow (2) Timer
U0818564	Fan
U0818602	Gearmotor Assembly
U0818740	Timer (2400T Plus)
U8800431	15' X 1/4" PE Tubing
U8800712	Injection Fitting
U8800753	Pump Head Assembly Kit (No Tubing)
U0812955	Hex Screw 8 - 32 X 1/4"
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2400T DC SERIES PARTS PRICE SCHEDULE

Part No.	Description
U0812955	Screw 6 - 32 X .25" PHP
U0817888	Shoulder Screw
U0818026	Spacer SST (Motor)
U0818061	Toggle Sw itch
U0818666	Screw 8 - 32 X 1.25 FHP
U0818881	12V DC Motor
U0818888	PVC Spacer (Timer)
U0818895	1/4" X 20' Tubing PE
U0818897	Housing Assembly w /lock
U0818901	Lock Nuts (10-24 NY - Lock)

Part No.	Description
U0818902	Battery Holder Assembly
U0818903	Low Battery Board Assembly
U0818904	Ground Wire Connection
U0819037	12V DC Timer LO AMP
U8800490	Injection Fitting
U8800637	7/16" Tubing Kit (Peristaltic)
U8800651	Pump Head Assembly Kit (No Tubing)
U8800700	3/8" Tubing Kit
U8800742	Kit, Pump Head Bearings (2 - U0817121)